LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 4

2018

Bate Stamp Numbers
00837877 - 00839726

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Longhorn Army Ammunition Plant

1976 – 2018

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX

VOLUME 4

2018

A. Title: Report (cont'd) - Addendum 1 to the Final Report for the In Situ Microbial Reactor Enhanced Bioremediation Field Test (Appendices D and E)
Author(s): U.S. Army Aberdeen Test Center
Recipient:
Date: August 2015
Bate Stamp: 00837877 – 00839726

METHOD BLANK SUMMARY

Login Number: L12120503
Work Group: WG416958
Blank File ID: P2.121812.181138
Blank Sample ID: WG416850-02
Prep Date: 12/18/12 06:18
Instrument ID: PE-ICP2
Analyzed Date: 12/18/12 18:11
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG416850-03	P2.121812.181833	12/18/12 18:18	01
MW1-1	L12120503-01	P2.121812.195513	12/18/12 19:55	01
MW1-1-D	L12120503-02	P2.121812.200112	12/18/12 20:01	01
MW1-1-2	L12120503-03	P2.121812.200809	12/18/12 20:08	01
MW2-1	L12120503-04	P2.121812.201410	12/18/12 20:14	01
FIELDBLANK10DEC2012	L12120503-05	P2.121812.202010	12/18/12 20:20	01
MW2-2	L12120503-06	P2.121812.203959	12/18/12 20:39	01
MW3-1	L12120503-09	P2.121812.204558	12/18/12 20:45	01
MW3-1MS	L12120503-10	P2.121812.205157	12/18/12 20:51	01
MW3-1MSD	L12120503-11	P2.121812.205757	12/18/12 20:57	01

Report Name: BLANK_SUMMARY
PDF File ID: 2704910
Report generated 12/21/2012 11:27

METHOD BLANK SUMMARY

Login Number: L12120503
Blank File ID: P2.121912.103243
Prep Date: 12/18/12 06:23
Analyzed Date: 12/19/12 10:32
Analyst: KHR

Work Group: WG416961
Blank Sample ID: WG416853-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG416853-03	P2.121912.103939	12/19/12 10:39	01
MW2-3	L12120503-08	P2.121912.104539	12/19/12 10:45	01
MW3-2	L12120503-12	P2.121912.105236	12/19/12 10:52	01
FIELDBLANK11DEC2012	L12120503-13	P2.121912.105836	12/19/12 10:58	01
MW3-3	L12120503-15	P2.121912.110529	12/19/12 11:05	01
MW-58	L12120503-16	P2.121912.111127	12/19/12 11:11	01
35BWW03	L12120503-17	P2.121912.111725	12/19/12 11:17	01
35BWW08	L12120503-18	P2.121912.141323	12/19/12 14:13	01
35BWW06	L12120503-19	P2.121912.141923	12/19/12 14:19	01
FIELDBLANK12DEC2012	L12120503-20	P2.121912.142526	12/19/12 14:25	01
35BWW05	L12120503-22	P2.121912.143223	12/19/12 14:32	01
35BWW14	L12120503-23	P2.121912.143823	12/19/12 14:38	01
MW4-1	L12120503-24	P2.121912.144523	12/19/12 14:45	01
MW4-1D	L12120503-25	P2.121912.145124	12/19/12 14:51	01
MW4-1MS	L12120503-26	P2.121912.145721	12/19/12 14:57	01
MW4-1MSD	L12120503-27	P2.121912.150457	12/19/12 15:04	01
MW4-2	L12120503-28	P2.121912.151057	12/19/12 15:10	01
MW4-3	L12120503-29	P2.121912.152949	12/19/12 15:29	01
35BWW03	L12120503-17	P2.122012.162652	12/20/12 16:26	DL01
35BWW06	L12120503-19	P2.122012.164641	12/20/12 16:46	DL01
MW4-1	L12120503-24	P2.122012.165336	12/20/12 16:53	DL01
MW4-1D	L12120503-25	P2.122012.170032	12/20/12 17:00	DL01
MW4-1MS	L12120503-26	P2.122012.170733	12/20/12 17:07	DL01
MW4-1MSD	L12120503-27	P2.122012.171430	12/20/12 17:14	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2704910
Report generated 12/21/2012 11:27

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L12120503 Prep Date: 12/18/12 06:18 Sample ID: WG416850-02
Instrument ID: PE-ICP2 Run Date: 12/18/12 18:11 Prep Method: 3005A
File ID: P2.121812.181138 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG416958 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-18-DEC-12

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.100	0.0500	1	U
Calcium, Total	0.100	0.200	0.100	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.00500	0.0100	0.00500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2704911
20-DEC-2012 09:33

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L12120503 Prep Date: 12/18/12 06:23 Sample ID: WG416853-02
Instrument ID: PE-ICP2 Run Date: 12/19/12 10:32 Prep Method: 3005A
File ID: P2.121912.103243 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG416961 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-19-DEC-12

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.100	0.0500	1	U
Calcium, Total	0.100	0.200	0.100	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.00500	0.0100	0.00500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2704911
20-DEC-2012 09:33

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12120503 Run Date: 12/18/2012 Sample ID: WG416850-03
Instrument ID: PE-ICP2 Run Time: 18:18 Prep Method: 3005A
File ID: P2.121812.181833 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG416958 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD55270 Cal ID: PE-ICP-18-DEC-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	5.00	4.84	96.8	85 - 115	
Calcium, Total	5.00	4.94	98.8	85 - 115	
Iron, Total	2.00	2.02	101	85 - 115	
Magnesium, Total	5.00	4.98	99.6	85 - 115	
Potassium, Total	25.0	23.3	93.1	85 - 115	
Sodium, Total	25.0	23.9	95.6	85 - 115	
Strontium, Total	0.500	0.493	98.6	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2704912
Report generated: 12/20/2012 09:33

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12120503 Run Date: 12/19/2012 Sample ID: WG416853-03
Instrument ID: PE-ICP2 Run Time: 10:39 Prep Method: 3005A
File ID: P2.121912.103939 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG416961 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD55270 Cal ID: PE-ICP-19-DEC-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	5.00	4.74	94.8	85 - 115	
Calcium, Total	5.00	4.82	96.3	85 - 115	
Iron, Total	2.00	1.95	97.7	85 - 115	
Magnesium, Total	5.00	4.85	97.0	85 - 115	
Potassium, Total	25.0	23.9	95.8	85 - 115	
Sodium, Total	25.0	23.2	93.0	85 - 115	
Strontium, Total	0.500	0.480	95.9	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2704912
Report generated: 12/20/2012 09:33

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L12120503 Cal ID:PE-ICP2- 18-DEC-12 Worknum:WG416958

Instrument ID:PE-ICP2 Contract #: Prep Method:3005A

Parent ID:L12120503-09 File ID:P2.121812.204558 Dil:1 Method:6010B

Sample ID:L12120503-10 MS File ID:P2.121812.205157 Dil:1 Matrix:Water

Sample ID:L12120503-11 MSD File ID:P2.121812.205757 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.848	5.00	5.30	88.9	5.00	5.11	85.2	3.57	80 - 120	20	
Calcium, Total	16.1	5.00	22.4	125	5.00	21.6	109	3.47	80 - 120	20	*
Iron, Total	0.906	2.00	2.46	77.8	2.00	2.29	69	7.42	80 - 120	20	*
Magnesium, Total	7.60	5.00	12.5	97.4	5.00	12.2	91.4	2.44	80 - 120	20	
Potassium, Total	7.01	25.0	28.7	86.9	25.0	28.3	85.1	1.64	80 - 120	20	
Sodium, Total	95.1	25.0	118	89.9	25.0	112	68	4.76	80 - 120	20	*
Strontium, Total	0.600	0.500	1.08	95	0.500	1.04	88.1	3.26	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2704930

Report generated 12/27/2012 16:48

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L12120503 Cal ID:PE-ICP2- 19-DEC-12 Worknum:WG416961

Instrument ID:PE-ICP2 Contract #: Prep Method:3005A

Parent ID:L12120503-24 File ID:P2.121912.144523 Dil:1 Method:6010B

Sample ID:L12120503-26 MS File ID:P2.121912.145721 Dil:1 Matrix:Water

Sample ID:L12120503-27 MSD File ID:P2.121912.150457 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	1.49	5.00	8.45	139	5.00	8.55	141	1.10	80 - 120	20	*
Calcium, Total	39.3	5.00	47.9	171	5.00	45.3	120	5.50	80 - 120	20	*
Iron, Total	2.82	2.00	5.61	140	2.00	5.60	139	0.103	80 - 120	20	*
Magnesium, Total	17.1	5.00	23.8	134	5.00	22.5	108	5.60	80 - 120	20	*
Potassium, Total	3.05	25.0	27.8	98.9	25.0	27.1	96.3	2.36	80 - 120	20	
Strontium, Total	1.08	0.500	1.69	123	0.500	1.60	106	5.18	80 - 120	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2704930

Report generated 12/27/2012 16:48

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L12120503 Cal ID:PE-ICP2- 20-DEC-12 Worknum:WG416961

Instrument ID:PE-ICP2 Contract #: Prep Method:3005A

Parent ID:L12120503-24 File ID:P2.122012.165336 Dil:50 Method:6010B

Sample ID:L12120503-26 MS File ID:P2.122012.170733 Dil:50 Matrix:Water

Sample ID:L12120503-27 MSD File ID:P2.122012.171430 Dil:50 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Sodium, Total	235	25.0	274	154	25.0	253	71.3	7.83	80 - 120	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2704930

Report generated 12/27/2012 16:48

METHOD BLANK SUMMARY

Login Number: L12120503
Work Group: WG416945
Blank File ID: NI.121812.125513
Blank Sample ID: WG416856-03
Prep Date: 12/18/12 06:40
Instrument ID: ICP-MS2
Analyzed Date: 12/18/12 12:55
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG416856-04	NI.121812.125835	12/18/12 12:58	01
MW4-1	L12120503-24	NI.121812.130157	12/18/12 13:01	01
MW4-1MS	L12120503-26	NI.121812.130519	12/18/12 13:05	01
MW4-1MSD	L12120503-27	NI.121812.130842	12/18/12 13:08	01
MW4-1D	L12120503-25	NI.121812.131205	12/18/12 13:12	01
DUP	WG416856-08	NI.121812.142139	12/18/12 14:21	01
MW4-1	L12120503-24	NI.121812.174250	12/18/12 17:42	DL01
MW4-1MS	L12120503-26	NI.121812.174613	12/18/12 17:46	DL01
MW4-1MSD	L12120503-27	NI.121812.174936	12/18/12 17:49	DL01
MW4-1D	L12120503-25	NI.121812.175258	12/18/12 17:52	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2704133
Report generated 12/20/2012 16:16

METHOD BLANK SUMMARY

Login Number: L12120503
Work Group: WG417061
Blank File ID: NI.121912.132011
Blank Sample ID: WG416849-02
Prep Date: 12/18/12 05:58
Instrument ID: ICP-MS2
Analyzed Date: 12/19/12 13:20
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG416849-03	NI.121912.132334	12/19/12 13:23	01
MW3-1	L12120503-09	NI.121912.132657	12/19/12 13:26	01
MW3-1MS	L12120503-10	NI.121912.133019	12/19/12 13:30	01
MW3-1MSD	L12120503-11	NI.121912.133342	12/19/12 13:33	01
MW1-1	L12120503-01	NI.121912.133703	12/19/12 13:37	01
MW1-1-D	L12120503-02	NI.121912.134025	12/19/12 13:40	01
MW1-1-2	L12120503-03	NI.121912.140045	12/19/12 14:00	01
MW2-1	L12120503-04	NI.121912.140406	12/19/12 14:04	01
FIELDBLANK10DEC2012	L12120503-05	NI.121912.140729	12/19/12 14:07	01
MW2-2	L12120503-06	NI.121912.141051	12/19/12 14:10	01
MW2-3	L12120503-08	NI.121912.141414	12/19/12 14:14	01
MW3-2	L12120503-12	NI.121912.141737	12/19/12 14:17	01
FIELDBLANK11DEC2012	L12120503-13	NI.121912.142059	12/19/12 14:20	01
MW3-3	L12120503-15	NI.121912.142422	12/19/12 14:24	01
MW-58	L12120503-16	NI.121912.142744	12/19/12 14:27	01
35BWW03	L12120503-17	NI.121912.143107	12/19/12 14:31	01
35BWW08	L12120503-18	NI.121912.144118	12/19/12 14:41	01
35BWW06	L12120503-19	NI.121912.144440	12/19/12 14:44	01
FIELDBLANK12DEC2012	L12120503-20	NI.121912.144802	12/19/12 14:48	01
35BWW05	L12120503-22	NI.121912.145124	12/19/12 14:51	01
35BWW14	L12120503-23	NI.121912.145447	12/19/12 14:54	01
MW4-2	L12120503-28	NI.121912.145809	12/19/12 14:58	01
MW4-3	L12120503-29	NI.121912.150132	12/19/12 15:01	01
MW3-3	L12120503-15	NI.122012.150612	12/20/12 15:06	DL01
MW2-2	L12120503-06	NI.122012.151018	12/20/12 15:10	DL01
MW4-2	L12120503-28	NI.122012.151341	12/20/12 15:13	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2704133
Report generated 12/20/2012 16:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L12120503 Prep Date:12/18/12 06:40 Sample ID:WG416856-03
Instrument ID:ICP-MS2 Run Date:12/18/12 12:55 Prep Method:3015
File ID:NI.121812.125513 Analyst:JYH Method:6020
Workgroup (AAB#):WG416945 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-MS-18-DEC-12

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2704134
20-DEC-2012 16:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12120503 Prep Date: 12/18/12 05:58 Sample ID: WG416849-02
Instrument ID: ICP-MS2 Run Date: 12/19/12 13:20 Prep Method: 3015
File ID: NI.121912.132011 Analyst: JYH Method: 6020
Workgroup (AAB#): WG417061 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-19-DEC-12

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2704134
20-DEC-2012 16:16

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12120503 Run Date: 12/18/2012 Sample ID: WG416856-04
Instrument ID: ICP-MS2 Run Time: 12:58 Prep Method: 3015
File ID: NI.121812.125835 Analyst: JYH Method: 6020
Workgroup (AAB#): WG416945 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD53323 Cal ID: ICP-MS-18-DEC-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0636	102	80 - 120	
Barium, Total	0.0625	0.0628	100	80 - 120	
Cadmium, Total	0.0625	0.0635	102	80 - 120	
Chromium, Total	0.0625	0.0630	101	80 - 120	
Copper, Total	0.0625	0.0635	102	80 - 120	
Lead, Total	0.0625	0.0644	103	80 - 120	
Manganese, Total	0.0625	0.0577	92.3	80 - 120	
Nickel, Total	0.0625	0.0624	99.9	80 - 120	
Selenium, Total	0.0625	0.0611	97.7	80 - 120	
Thallium, Total	0.0625	0.0628	101	80 - 120	
Vanadium, Total	0.0625	0.0621	99.3	80 - 120	
Zinc, Total	0.0625	0.0642	103	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2704135
Report generated: 12/20/2012 16:16

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12120503 Run Date: 12/19/2012 Sample ID: WG416849-03
Instrument ID: ICP-MS2 Run Time: 13:23 Prep Method: 3015
File ID: NI.121912.132334 Analyst: JYH Method: 6020
Workgroup (AAB#): WG417061 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD53323 Cal ID: ICP-MS-19-DEC-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0603	96.5	80 - 120	
Barium, Total	0.0625	0.0609	97.5	80 - 120	
Cadmium, Total	0.0625	0.0603	96.5	80 - 120	
Chromium, Total	0.0625	0.0611	97.8	80 - 120	
Copper, Total	0.0625	0.0628	100	80 - 120	
Lead, Total	0.0625	0.0628	100	80 - 120	
Manganese, Total	0.0625	0.0586	93.8	80 - 120	
Nickel, Total	0.0625	0.0619	99.0	80 - 120	
Selenium, Total	0.0625	0.0589	94.3	80 - 120	
Thallium, Total	0.0625	0.0608	97.4	80 - 120	
Vanadium, Total	0.0625	0.0594	95.0	80 - 120	
Zinc, Total	0.0625	0.0623	99.8	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2704135
Report generated: 12/20/2012 16:16

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L12120503 Cal ID:ICP-MS2- 18-DEC-12 Worknum:WG416945

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L12120503-24 File ID:NI.121812.130157 Dil:1 Method:6020

Sample ID:L12120503-26 MS File ID:NI.121812.130519 Dil:1 Matrix:Water

Sample ID:L12120503-27 MSD File ID:NI.121812.130842 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	0.000617	0.0625	0.0643	102	0.0625	0.0617	97.7	4.09	75 - 125	20	
Barium, Total	0.0516	0.0625	0.117	104	0.0625	0.108	90.1	7.94	75 - 125	20	
Cadmium, Total	0.00110	0.0625	0.0662	104	0.0625	0.0648	102	2.10	75 - 125	20	
Chromium, Total	0.00620	0.0625	0.0729	107	0.0625	0.0701	102	3.90	75 - 125	20	
Copper, Total	0.00512	0.0625	0.0667	98.5	0.0625	0.0651	95.9	2.46	75 - 125	20	
Lead, Total	0.00205	0.0625	0.0693	108	0.0625	0.0670	104	3.39	75 - 125	20	
Nickel, Total	0.00814	0.0625	0.0708	100	0.0625	0.0690	97.4	2.51	75 - 125	20	
Selenium, Total	0.00355	0.0625	0.0722	110	0.0625	0.0714	109	1.11	75 - 125	20	
Thallium, Total	0.000135	0.0625	0.0661	105	0.0625	0.0638	102	3.54	75 - 125	20	
Vanadium, Total	0.00717	0.0625	0.0757	110	0.0625	0.0714	103	5.86	75 - 125	20	
Zinc, Total	0.0489	0.0625	0.124	121	0.0625	0.105	90.5	16.3	75 - 125	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2704136

Report generated 12/20/2012 16:16

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L12120503 Cal ID: ICP-MS2- 18-DEC-12 Worknum:WG416945

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L12120503-24 File ID:NI.121812.174250 Dil:50 Method:6020

Sample ID:L12120503-26 MS File ID:NI.121812.174613 Dil:50 Matrix:Water

Sample ID:L12120503-27 MSD File ID:NI.121812.174936 Dil:50 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Manganese, Total	0.795	0.0625	0.819	38.2	0.0625	0.734	-96.6	10.8	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2704136

Report generated 12/20/2012 16:16

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L12120503 Cal ID: ICP-MS2- 19-DEC-12 Worknum:WG417061

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L12120503-09 File ID:NI.121912.132657 Dil:1 Method:6020

Sample ID:L12120503-10 MS File ID:NI.121912.133019 Dil:1 Matrix:Water

Sample ID:L12120503-11 MSD File ID:NI.121912.133342 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	0.000552	0.0625	0.0604	95.8	0.0625	0.0622	98.6	2.88	75 - 125	20	
Barium, Total	0.0816	0.0625	0.140	93.2	0.0625	0.147	104	4.72	75 - 125	20	
Cadmium, Total	0.000539	0.0625	0.0595	94.3	0.0625	0.0617	97.9	3.78	75 - 125	20	
Chromium, Total	0.00244	0.0625	0.0609	93.5	0.0625	0.0637	98	4.45	75 - 125	20	
Copper, Total	0.00188	0.0625	0.0595	92.2	0.0625	0.0614	95.2	3.08	75 - 125	20	
Lead, Total	ND	0.0625	0.0620	99.1	0.0625	0.0649	104	4.68	75 - 125	20	
Manganese, Total	0.0822	0.0625	0.134	82.6	0.0625	0.138	89.2	3.01	75 - 125	20	
Nickel, Total	0.00223	0.0625	0.0600	92.5	0.0625	0.0621	95.7	3.33	75 - 125	20	
Selenium, Total	0.00193	0.0625	0.0610	94.5	0.0625	0.0637	98.9	4.42	75 - 125	20	
Thallium, Total	0.000225	0.0625	0.0599	95.4	0.0625	0.0629	100	4.97	75 - 125	20	
Vanadium, Total	0.0254	0.0625	0.0784	84.7	0.0625	0.0783	84.6	0.122	75 - 125	20	
Zinc, Total	ND	0.0625	0.0641	102	0.0625	0.0648	104	1.08	75 - 125	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2704136

Report generated 12/20/2012 16:16

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
February 15, 2013

ADC – ANTHONY D. CANTER	AJF – AMANDA J. FICKIESEN	AML – TONY M. LONG
AZH – AFTER HOURS	BAF – BRICE A. FENTON	BLG – BRENDA L. GREENWALT
BRG – BRENDA R. GREGORY	CAA – CASSIE A. AUGENSTEIN	CAF – CHERYL A. FLOWERS
CEB – CHAD E. BARNES	CLC – CHRYS L. CRAWFORD	CLS – CARA L. STRICKLER
CLW – CHARISSA L. WINTERS	CPD – CHAD P. DAVIS	CSH – CHRIS S. HILL
CTB – CHRIS T. BUCINA	DDE – DEBRA D. ELLIOTT	DEV – DAVID E. VANDENBERG
DIH – DEANNA I. HESSON	DLB – DAVID L. BUMGARNER	DLP – DOROTHY L. PAYNE
DLR – DIANNA L. RAUCH	DSM – DAVID S. MOSSOR	ECL – ERIC C. LAWSON
EDL – ERIN D. LONG	ERP – ERIN R. PORTER	FJB – FRANCES J. BOLDEN
HJR – HOLLY J. REED	JBK – JEREMY B. KINNEY	JDH – JUSTIN D. HESSON
JKS – JANE K. SCHAAD	JWR – JOHN W. RICHARDS	JWS – JACK W. SHEAVES
JYH – JI Y. HU	KEB – KATIE E. BARNES	KHR – KIM H. RHODES
KRA – KATHY R. ALBERTSON	LKN – LINDA K. NEDEFF	LSB – LESLIE S. BUCINA
MDA – MIKE D. ALBERTSON	MDC – MIKE D. COCHRAN	MES – MARY E. SCHILLING
MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR	MSW – MATT S. WILSON
PDM – PIERCE D. MORRIS	QX – QIN XU	RAH – ROY A. HALSTEAD
REK – BOB E. KYER	RLB – BOB BUCHANAN	RS – ROSEMARY SCOTT
RWC – RODNEY W. CAMPBELL	SEP – SUZANNE J. PAUGH	SLM – STEPHANIE L. MOSSBURG
SLP – SHERI L. PFALZGRAF	TMB – TIFFANY M. BAILEY	TMM – TAMMY M. MORRIS
VC – VICKI COLLIER	WJB – WILL J. BEASLEY	WTD – WADE T. DELONG
XXX – UNAVAILABLE OR SUBCONTRACT		

Microbac Laboratories Inc.
List of Valid Qualifiers
February 15, 2013

Qualkey: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated value; the analyte concentration was less than the RL/LOQ.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 31038

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LONG HORN AAP

Project ID: 3083.001 / B 66490

Sampler (print): CARL JOHNSON JR | Signature: Carl Johnson Jr

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MW1-1		X	12-10-12	0935	GW	4		3	1		
MW1-1D		X	12-10-12	0950	GW	4		3	1		
MW1-2		X	12-10-12	1120	GW	4		3	1		
MW2-1		X	12-10-12	1320	GW	4		3	1		
FIELD BLANK 10 DEC 12		X	12-10-12	1310	DISTILLED H2O	4		3	1		FIELD BLANK 10 DEC 2012
MW2-2		X	12-10-12	1440	GW	4		3	1		
TRIP BLANK 10 DEC 2012		X	12-10-12	—	—	2		2			
MW2-3		X	12-10-12	1545	GW	4		3	1		
MW3-1		X	12-11-12	0910	GW	4		3	1		
MW3-1 MS		X	12-11-12	0930	GW	4		3	1		
MW3-1 MSD		X	12-11-12	0945	GW	4		3	1		
MW3-2		X	12-11-12	1045	GW	4		3	1		
FIELD BLANK 11 DEC 2012		X	12-11-12	1010	GW	4		3	1		FIELD BLANK 11 DEC 2012
TRIP BLANK 11 DEC 2012		X	12-11-12	—	—	2		2			
MW3-3		X	12-11-12	1145	GW	4		3	1		
MW-58		X	12-11-12	1320	GW	4		3	1		
35B WW03		X	12-11-12	1430	GW	4		3	1		
35B WW08		X	12-11-12	1545	GW	4		3	1		
						68					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Carl Johnson Jr	12-13-2012	1100			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Microbac OVD
Received: 12/14/2012 11:04
By: BOB BUCHANAN
221000031040
RF Buchanan

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00837897

COC No. A 30956

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN

Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD

Location: LONGHORN AAP

Project ID: 3083.001 / B66490

Sampler (print): CARL JOHNSON JR

Signature: Carl Johnson

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	Total Metals	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
35B WW06		X	12-12-12	0920	GW	4		3	1		
FIELD BLANK 12Dec2012		X	↓	0910	GW	4		3	1		
TRIP BLANK 12Dec2012		X	↓	—	—	2		2			
35B WW05		X	↓	1145	GW	4		3	1		
35B WW14		X	↓	1340	GW	4		3	1		
MW 4-1		X	↓	1455	GW	4		3	1		
MW 4-1D		X	↓	1510	GW	4		3	1		
MW-4-1 MS		X	↓	1520	GW	4		3	1		
MW-4-1 MSD		X	↓	1530	GW	4		3	1		
MW-4-2		X	↓	1620	GW	4		3	1		
MW4-3		X	↓	1725	GW	4		3	1		
						42					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Carl Johnson	12-13-2012	1100	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)

Microbac OVD
Received: 12/14/2012 11:04
By: BOB BUCHANAN
221000031040
RF Buchanan

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 2 of 2

00837898

NELAP Addendum - March 4, 2011

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Sulfate (SO4) - 9038
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Nitroguanidine
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL KNITRO-C-WUV-VIS

Nitrocellulose

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL HPLCOS-HPLC-UV

Nitroguanidine

OVL KNITRO-C-S/UV-VIS

Nitrocellulose

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L13030527 *(Revised)*

Revised to include an 8260 narrative

Gene Fabian
Aberdeen Test Center
US Army Aberdeen Center
Aberdeen Proving Ground, MD 21005

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on April 01 2013

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: Microbac OVD

Microbac

Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0016638	H	1.0		1002239521960004575000873013166092
0018338	H	2.0		1015923821960004575000795768340956
0018110	H	1.0		1015923821960004575000795768340945

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35BWW14	L13030527-01	03/09/2013 09:30	03/14/2013 10:31
MW 4-1	L13030527-02	03/09/2013 11:00	03/14/2013 10:31
MW 4-2	L13030527-03	03/09/2013 12:30	03/14/2013 10:31
MW 4-2 D	L13030527-04	03/09/2013 12:45	03/14/2013 10:31
MW 4-2 MS	L13030527-05	03/09/2013 13:00	03/14/2013 10:31
MW 4-2 MSD	L13030527-06	03/09/2013 13:15	03/14/2013 10:31
MW 4-3	L13030527-07	03/09/2013 14:10	03/14/2013 10:31
TRIP BLANK 9MARCH2013	L13030527-08	03/09/2013 00:01	03/14/2013 10:31
FIELD BLANK 9MARCH2013	L13030527-09	03/09/2013 13:50	03/14/2013 10:31
35BWW09	L13030527-10	03/09/2013 16:20	03/14/2013 10:31
35BWW08	L13030527-11	03/10/2013 14:30	03/14/2013 10:31
35BWW08D	L13030527-12	03/10/2013 14:45	03/14/2013 10:31
MW1-1	L13030527-13	03/10/2013 16:00	03/14/2013 10:31
TRIP BLANK 10MARCH2013	L13030527-14	03/10/2013 00:01	03/14/2013 10:31
MW1-2	L13030527-15	03/11/2013 09:30	03/14/2013 10:31
TRIP BLANK 11MARCH2013	L13030527-16	03/11/2013 00:01	03/14/2013 10:31
FIELD BLANK 11MARCH2013	L13030527-17	03/11/2013 09:30	03/14/2013 10:31
MW2-1	L13030527-18	03/11/2013 12:30	03/14/2013 10:31
MW2-2	L13030527-19	03/11/2013 13:40	03/14/2013 10:31
MW2-2 MS	L13030527-20	03/11/2013 13:50	03/14/2013 10:31
MW2-2 MSD	L13030527-21	03/11/2013 14:00	03/14/2013 10:31
MW2-3	L13030527-22	03/11/2013 15:30	03/14/2013 10:31
MW3-1	L13030527-23	03/12/2013 09:15	03/14/2013 10:31
MW3-2	L13030527-24	03/12/2013 11:00	03/14/2013 10:31
MW3-2 D	L13030527-25	03/12/2013 11:15	03/14/2013 10:31
TRIP BLANK 12MARCH2013	L13030527-26	03/12/2013 00:01	03/14/2013 10:31
MW3-3	L13030527-27	03/12/2013 13:15	03/14/2013 10:31
FIELD BLANK 12MARCH2013	L13030527-28	03/12/2013 12:25	03/14/2013 10:31
MW-58	L13030527-29	03/12/2013 14:45	03/14/2013 10:31
35BWW04	L13030527-30	03/12/2013 15:50	03/14/2013 10:31
35BWW06	L13030527-31	03/13/2013 09:15	03/14/2013 10:31
35BWW05	L13030527-32	03/13/2013 10:50	03/14/2013 10:31

Microbac Laboratories
Case Narrative

Login Number: L13030527
Department: Volatiles
Analyst: Anthony Canter

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: Recoveries out of range were observed for the following analytes: dichlorodifluoromethane.

Continuing Calibration and Tune: Recoveries out of range were observed for the following analytes: dichlorodifluoromethane.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Recoveries out of range were observed for the following analytes: dichlorodifluoromethane.

Matrix Spikes: Recoveries out of range were observed for the following analytes: dichlorodifluoromethane. The RPD result for acetone exceeded the control limits. 2-chloroethyl vinyl ether was non detected in the MS/MSD analyzed 02/08/13 on HPMS11.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the

system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 61249
Approved By: Michael Albertson

Microbac Laboratories
Case Narrative

Login Number: L13030527
Department: Metals
Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: WG424195 - Due to continuing calibration verification failure for calcium on 19-MAR-2013 at 15:49, the batch QA/QC and client samples 01 through 07 and 09 were reanalyzed on a later calibration which was compliant for calcium.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG423950 - Client sample 10 required a dilution analysis in order to obtain a result for sodium within the linear range.

Narrative ID: 60717
Approved By: Sheri Pfalzgraf

Microbac Laboratories
Case Narrative

Login Number: L13030527
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG423871 - Client sample 02 required a dilution analysis in order to obtain a result for manganese within the linear range.

WG423996 - Client samples 20(MS) and 21(MSD) required dilution analyses in order to obtain results for zinc within the linear range. For consistency with samples 20(MS) and 21(MSD), reference sampl 19 was also reanalyzed at a dilution for zinc.

Narrative ID: 60670
Approved By: Sheri Pfalzgraf

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS11
Client ID:	35BWW14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/08/2013 15:49
Workgroup #:	WG423797	**Analyst:**	ADC	**Run Date:**	03/17/2013 23:33
Collect Date:	03/09/2013 09:30	**Dilution:**	1	**File ID:**	11M90318
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2	0.242	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.153	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	4.89		1.00	0.125
1,2-Dichloroethane	107-06-2	0.285	J	1.00	0.250
1,1-Dichloroethene	75-35-4	48.2		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	12.8		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	0.415	J	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	21.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	80.3		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.9	86	118	
1,2-Dichloroethane-d4	83.6	80	120	
Toluene-d8	99.6	88	110	
4-Bromofluorobenzene	97.9	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-01 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW14 **Prep Method:** 3005A **Prep Date:** 03/18/2013 09:24
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/20/2013 13:04
Workgroup #: WG424195 **Analyst:** KHR **Run Date:** 03/20/2013 16:24
Collect Date: 03/09/2013 09:30 **Dilution:** 1 **File ID:** T2.032013.162405
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	6.70		0.500	0.250
Potassium, Total	7440-09-7	1.78		1.00	0.500
Sodium, Total	7440-23-5	87.9		0.500	0.250
Strontium, Total	7440-24-6	0.453		0.0100	0.00500

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-01 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW14 **Prep Method:** 3005A **Prep Date:** 03/18/2013 09:24
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/21/2013 09:28
Workgroup #: WG424195 **Analyst:** QX **Run Date:** 03/21/2013 10:02
Collect Date: 03/09/2013 09:30 **Dilution:** 1 **File ID:** T2.032113.100201
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	13.1		0.200	0.100

Sample #: L13030527-01 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW14 **Prep Method:** 3015 **Prep Date:** 03/18/2013 06:23
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/18/2013 10:37
Workgroup #: WG423871 **Analyst:** JYH **Run Date:** 03/18/2013 11:58
Collect Date: 03/09/2013 09:30 **Dilution:** 1 **File ID:** NI.031813.115852
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0439		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000945		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00111	J	0.00200	0.00100

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0221		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00144		0.00100	0.000500
Thallium, Total	7440-28-0	0.000252		0.000200	0.000100
Vanadium, Total	7440-62-2	0.00256		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-02
Client ID: MW 4-1
Matrix: Water
Workgroup #: WG423797
Collect Date: 03/09/2013 11:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS11
Prep Date: N/A
Cal Date: 02/08/2013 15:49
Run Date: 03/18/2013 00:05
File ID: 11M90319

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0	0.974	J	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.155	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.261	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.931	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.540	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	16.6		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.27		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.4	86	118	
1,2-Dichloroethane-d4	83.1	80	120	
Toluene-d8	99.8	88	110	
4-Bromofluorobenzene	97.1	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-02
Client ID: MW 4-1
Matrix: Water
Workgroup #: WG424195
Collect Date: 03/09/2013 11:00
Sample Tag: 02
PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L
Instrument: ICP-THERMO2
Prep Date: 03/18/2013 09:24
Cal Date: 03/21/2013 09:28
Run Date: 03/21/2013 10:05
File ID: T2.032113.100523

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	30.4		0.200	0.100

Sample #: L13030527-02
Client ID: MW 4-1
Matrix: Water
Workgroup #: WG424195
Collect Date: 03/09/2013 11:00
Sample Tag: 01
PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L
Instrument: ICP-THERMO2
Prep Date: 03/18/2013 09:24
Cal Date: 03/20/2013 13:04
Run Date: 03/20/2013 16:27
File ID: T2.032013.162727

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.155		0.100	0.0500
Iron, Total	7439-89-6	0.500		0.100	0.0500
Magnesium, Total	7439-95-4	13.1		0.500	0.250
Potassium, Total	7440-09-7	2.76		1.00	0.500
Sodium, Total	7440-23-5	173		0.500	0.250
Strontium, Total	7440-24-6	0.848		0.0100	0.00500

Microbac

Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-1	**Prep Method:**	3015	**Prep Date:**	03/18/2013 06:23
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/18/2013 10:37
Workgroup #:	WG423871	**Analyst:**	JYH	**Run Date:**	03/18/2013 12:02
Collect Date:	03/09/2013 11:00	**Dilution:**	1	**File ID:**	NI.031813.120215
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0361		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000503	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00184	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00297		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0	0.00351	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00169		0.00100	0.000500
Thallium, Total	7440-28-0	0.000192	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00103		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L13030527-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-1	**Prep Method:**	3015	**Prep Date:**	03/18/2013 06:23
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/20/2013 09:33
Workgroup #:	WG423871	**Analyst:**	JYH	**Run Date:**	03/20/2013 12:17
Collect Date:	03/09/2013 11:00	**Dilution:**	50	**File ID:**	NI.032013.121726
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.403		0.100	0.0500

Sample #:	L13030527-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS11
Client ID:	MW 4-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/08/2013 15:49
Workgroup #:	WG423797	**Analyst:**	ADC	**Run Date:**	03/18/2013 00:36
Collect Date:	03/09/2013 12:30	**Dilution:**	1	**File ID:**	11M90320
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.320	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.79		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.465	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	7.06		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.77		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4	0.254	J	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.5	86	118	
1,2-Dichloroethane-d4	85.6	80	120	
Toluene-d8	103	88	110	
4-Bromofluorobenzene	101	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Sample #:	L13030527-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW 4-2	**Prep Method:**	3005A	**Prep Date:**	03/18/2013 09:24
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/20/2013 13:04
Workgroup #:	WG424195	**Analyst:**	KHR	**Run Date:**	03/20/2013 16:37
Collect Date:	03/09/2013 12:30	**Dilution:**	1	**File ID:**	T2.032013.163739
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Iron, Total	7439-89-6	0.0773	J	0.100	0.0500
Magnesium, Total	7439-95-4	5.13		0.500	0.250
Potassium, Total	7440-09-7	1.10		1.00	0.500
Sodium, Total	7440-23-5	88.1		0.500	0.250
Strontium, Total	7440-24-6	0.274		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L13030527-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW 4-2	**Prep Method:**	3005A	**Prep Date:**	03/18/2013 09:24
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/21/2013 09:28
Workgroup #:	WG424195	**Analyst:**	QX	**Run Date:**	03/21/2013 10:08
Collect Date:	03/09/2013 12:30	**Dilution:**	1	**File ID:**	T2.032113.100848
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	10.2		0.200	0.100

Sample #:	L13030527-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-2	**Prep Method:**	3015	**Prep Date:**	03/18/2013 06:23
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/18/2013 10:37
Workgroup #:	WG423871	**Analyst:**	JYH	**Run Date:**	03/18/2013 11:48
Collect Date:	03/09/2013 12:30	**Dilution:**	1	**File ID:**	NI.031813.114844
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0567		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00154		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500

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Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.123		0.00200	0.00100
Nickel, Total	7440-02-0	0.00237	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00127		0.00100	0.000500
Thallium, Total	7440-28-0	0.000184	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00401		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-04
Client ID: MW 4-2 D
Matrix: Water
Workgroup #: WG423797
Collect Date: 03/09/2013 12:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS11
Prep Date: N/A
Cal Date: 02/08/2013 15:49
Run Date: 03/18/2013 01:07
File ID: 11M90321

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.130	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.274	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.58		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.463	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	6.52		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.56		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.3	86	118	
1,2-Dichloroethane-d4	85.3	80	120	
Toluene-d8	100	88	110	
4-Bromofluorobenzene	97.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-04
Client ID: MW 4-2 D
Matrix: Water
Workgroup #: WG424195
Collect Date: 03/09/2013 12:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/18/2013 09:24
Cal Date: 03/20/2013 13:04
Run Date: 03/20/2013 16:41
File ID: T2.032013.164102

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Iron, Total	7439-89-6	0.0785	J	0.100	0.0500
Magnesium, Total	7439-95-4	5.11		0.500	0.250
Potassium, Total	7440-09-7	1.10		1.00	0.500
Sodium, Total	7440-23-5	85.4		0.500	0.250
Strontium, Total	7440-24-6	0.273		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-04
Client ID: MW 4-2 D
Matrix: Water
Workgroup #: WG424195
Collect Date: 03/09/2013 12:45
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/18/2013 09:24
Cal Date: 03/21/2013 09:28
Run Date: 03/21/2013 10:32
File ID: T2.032113.103240

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	9.88		0.200	0.100

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Sample #:	L13030527-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-2 D	**Prep Method:**	3015	**Prep Date:**	03/18/2013 07:17
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/18/2013 15:06
Workgroup #:	WG423922	**Analyst:**	JYH	**Run Date:**	03/18/2013 16:04
Collect Date:	03/09/2013 12:45	**Dilution:**	1	**File ID:**	NI.031813.160417
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0595		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00177		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.130		0.00200	0.00100
Nickel, Total	7440-02-0	0.00242	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000931	J	0.00100	0.000500
Thallium, Total	7440-28-0	0.000175	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00341		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L13030527-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS11
Client ID:	MW 4-2 MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/08/2013 15:49
Workgroup #:	WG423797	**Analyst:**	ADC	**Run Date:**	03/17/2013 16:45
Collect Date:	03/09/2013 13:00	**Dilution:**	1	**File ID:**	11M90305
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	24.5		10.0	2.50
Benzene	71-43-2	21.2		1.00	0.125
Bromobenzene	108-86-1	19.7		1.00	0.125
Bromochloromethane	74-97-5	20.6		1.00	0.200
Bromodichloromethane	75-27-4	20.6		1.00	0.250
Bromoform	75-25-2	21.8		1.00	0.500
Bromomethane	74-83-9	17.5		1.00	0.500
2-Butanone	78-93-3	22.7		10.0	2.50
n-Butylbenzene	104-51-8	18.4		1.00	0.250
sec-Butylbenzene	135-98-8	17.0		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6	17.3		1.00	0.250
Carbon disulfide	75-15-0	17.8		1.00	0.500
Carbon tetrachloride	56-23-5	19.4		1.00	0.250
Chlorobenzene	108-90-7	19.2		1.00	0.125
Chlorodibromomethane	124-48-1	20.6		1.00	0.250
Chloroethane	75-00-3	21.3		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.2		1.00	0.125
Chloromethane	74-87-3	15.2		1.00	0.500
2-Chlorotoluene	95-49-8	18.3		1.00	0.125
4-Chlorotoluene	106-43-4	17.9		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	19.3		5.00	1.00
1,2-Dibromoethane	106-93-4	21.8		1.00	0.250
Dibromomethane	74-95-3	21.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.4		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.2		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.5		1.00	0.125
Dichlorodifluoromethane	75-71-8	20.1		1.00	0.250
1,1-Dichloroethane	75-34-3	21.0		1.00	0.125
1,2-Dichloroethane	107-06-2	20.2		1.00	0.250
1,1-Dichloroethene	75-35-4	19.9		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	21.5		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	21.0		1.00	0.250
1,2-Dichloropropane	78-87-5	22.9		1.00	0.200
1,3-Dichloropropane	142-28-9	21.8		1.00	0.200
2,2-Dichloropropane	594-20-7	19.0		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	22.8		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	21.0		1.00	0.500
1,1-Dichloropropene	563-58-6	20.4		1.00	0.250
Ethylbenzene	100-41-4	19.9		1.00	0.250
2-Hexanone	591-78-6	21.9		10.0	2.50
Hexachlorobutadiene	87-68-3	15.1		1.00	0.250
Isopropylbenzene	98-82-8	18.3		1.00	0.250
p-Isopropyltoluene	99-87-6	18.0		1.00	0.250
4-Methyl-2-pentanone	108-10-1	22.1		10.0	2.50
Methylene chloride	75-09-2	20.7		5.00	0.250
Naphthalene	91-20-3	18.4		1.00	0.200
n-Propylbenzene	103-65-1	18.4		1.00	0.125
Styrene	100-42-5	20.9		1.00	0.125

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6	21.1		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	21.3		1.00	0.200
Tetrachloroethene	127-18-4	26.0		1.00	0.250
Toluene	108-88-3	20.7		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	19.4		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	19.2		1.00	0.200
1,1,1-Trichloroethane	71-55-6	19.5		1.00	0.250
1,1,2-Trichloroethane	79-00-5	22.3		1.00	0.250
Trichloroethene	79-01-6	24.2		1.00	0.250
Trichlorofluoromethane	75-69-4	18.4		1.00	0.250
1,2,3-Trichloropropane	96-18-4	20.7		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.0		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	20.4		1.00	0.250
Vinyl acetate	108-05-4	29.9		10.0	2.50
Vinyl chloride	75-01-4	15.1		1.00	0.250
o-Xylene	95-47-6	18.7		1.00	0.250
m-,p-Xylene	179601-23-1	39.2		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.5	86	118	
1,2-Dichloroethane-d4	86.2	80	120	
Toluene-d8	99.0	88	110	
4-Bromofluorobenzene	93.2	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-05
Client ID: MW 4-2 MS
Matrix: Water
Workgroup #: WG424195
Collect Date: 03/09/2013 13:00
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/18/2013 09:24
Cal Date: 03/21/2013 09:28
Run Date: 03/21/2013 10:12
File ID: T2.032113.101211

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	15.5		0.200	0.100

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW 4-2 MS	**Prep Method:**	3005A	**Prep Date:**	03/18/2013 09:24
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/20/2013 13:04
Workgroup #:	WG424195	**Analyst:**	KHR	**Run Date:**	03/20/2013 16:44
Collect Date:	03/09/2013 13:00	**Dilution:**	1	**File ID:**	T2.032013.164425
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	4.89		0.100	0.0500
Iron, Total	7439-89-6	2.08		0.100	0.0500
Magnesium, Total	7439-95-4	10.3		0.500	0.250
Potassium, Total	7440-09-7	25.8		1.00	0.500
Sodium, Total	7440-23-5	112		0.500	0.250
Strontium, Total	7440-24-6	0.788		0.0100	0.00500

Sample #:	L13030527-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-2 MS	**Prep Method:**	3015	**Prep Date:**	03/18/2013 06:23
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/18/2013 10:37
Workgroup #:	WG423871	**Analyst:**	JYH	**Run Date:**	03/18/2013 11:52
Collect Date:	03/09/2013 13:00	**Dilution:**	1	**File ID:**	NI.031813.115207
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0683		0.00100	0.000500
Barium, Total	7440-39-3	0.126		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0694		0.000600	0.000300
Chromium, Total	7440-47-3	0.0687		0.00200	0.00100
Copper, Total	7440-50-8	0.0678		0.00200	0.00100
Lead, Total	7439-92-1	0.0681		0.00100	0.000500
Manganese, Total	7439-96-5	0.201		0.00200	0.00100
Nickel, Total	7440-02-0	0.0690		0.00400	0.00200
Selenium, Total	7782-49-2	0.0694		0.00100	0.000500
Thallium, Total	7440-28-0	0.0673		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0725		0.00100	0.000500
Zinc, Total	7440-66-6	0.0734		0.0250	0.0125

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-06	**PrePrep Method:**	N/A	**Instrument:**	HPMS11
Client ID:	MW 4-2 MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/08/2013 15:49
Workgroup #:	WG423797	**Analyst:**	ADC	**Run Date:**	03/17/2013 17:16
Collect Date:	03/09/2013 13:15	**Dilution:**	1	**File ID:**	11M90306
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	19.7		10.0	2.50
Benzene	71-43-2	21.1		1.00	0.125
Bromobenzene	108-86-1	19.8		1.00	0.125
Bromochloromethane	74-97-5	20.9		1.00	0.200
Bromodichloromethane	75-27-4	20.7		1.00	0.250
Bromoform	75-25-2	21.5		1.00	0.500
Bromomethane	74-83-9	17.7		1.00	0.500
2-Butanone	78-93-3	21.9		10.0	2.50
n-Butylbenzene	104-51-8	18.3		1.00	0.250
sec-Butylbenzene	135-98-8	17.1		1.00	0.250
tert-Butylbenzene	98-06-6	17.4		1.00	0.250
Carbon disulfide	75-15-0	17.6		1.00	0.500
Carbon tetrachloride	56-23-5	19.0		1.00	0.250
Chlorobenzene	108-90-7	19.3		1.00	0.125
Chlorodibromomethane	124-48-1	21.1		1.00	0.250
Chloroethane	75-00-3	21.3		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.3		1.00	0.125
Chloromethane	74-87-3	15.5		1.00	0.500
2-Chlorotoluene	95-49-8	18.5		1.00	0.125
4-Chlorotoluene	106-43-4	18.1		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	19.5		5.00	1.00
1,2-Dibromoethane	106-93-4	21.7		1.00	0.250
Dibromomethane	74-95-3	21.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.8		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.7		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.6		1.00	0.125
Dichlorodifluoromethane	75-71-8	19.3		1.00	0.250
1,1-Dichloroethane	75-34-3	21.3		1.00	0.125
1,2-Dichloroethane	107-06-2	19.8		1.00	0.250
1,1-Dichloroethene	75-35-4	19.5		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	22.1		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	20.9		1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	23.1		1.00	0.200
1,3-Dichloropropane	142-28-9	21.8		1.00	0.200
2,2-Dichloropropane	594-20-7	18.6		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	22.8		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	20.7		1.00	0.500
1,1-Dichloropropene	563-58-6	19.8		1.00	0.250
Ethylbenzene	100-41-4	19.7		1.00	0.250
2-Hexanone	591-78-6	22.0		10.0	2.50
Hexachlorobutadiene	87-68-3	15.4		1.00	0.250
Isopropylbenzene	98-82-8	18.3		1.00	0.250
p-Isopropyltoluene	99-87-6	18.0		1.00	0.250
4-Methyl-2-pentanone	108-10-1	21.5		10.0	2.50
Methylene chloride	75-09-2	20.8		5.00	0.250
Naphthalene	91-20-3	18.7		1.00	0.200
n-Propylbenzene	103-65-1	18.5		1.00	0.125
Styrene	100-42-5	20.9		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.2		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	21.6		1.00	0.200
Tetrachloroethene	127-18-4	25.8		1.00	0.250
Toluene	108-88-3	20.7		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	19.5		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	19.5		1.00	0.200
1,1,1-Trichloroethane	71-55-6	19.3		1.00	0.250
1,1,2-Trichloroethane	79-00-5	22.8		1.00	0.250
Trichloroethene	79-01-6	24.3		1.00	0.250
Trichlorofluoromethane	75-69-4	17.9		1.00	0.250
1,2,3-Trichloropropane	96-18-4	20.8		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.2		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	20.3		1.00	0.250
Vinyl acetate	108-05-4	28.7		10.0	2.50
Vinyl chloride	75-01-4	15.3		1.00	0.250
o-Xylene	95-47-6	18.9		1.00	0.250
m-,p-Xylene	179601-23-1	39.4		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	87.2	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	96.8	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW 4-2 MSD	**Prep Method:**	3005A	**Prep Date:**	03/18/2013 09:24
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/20/2013 13:04
Workgroup #:	WG424195	**Analyst:**	KHR	**Run Date:**	03/20/2013 16:47
Collect Date:	03/09/2013 13:15	**Dilution:**	1	**File ID:**	T2.032013.164737
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	4.98		0.100	0.0500
Iron, Total	7439-89-6	2.11		0.100	0.0500
Magnesium, Total	7439-95-4	10.5		0.500	0.250
Potassium, Total	7440-09-7	26.3		1.00	0.500
Sodium, Total	7440-23-5	110		0.500	0.250
Strontium, Total	7440-24-6	0.791		0.0100	0.00500

Sample #:	L13030527-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW 4-2 MSD	**Prep Method:**	3005A	**Prep Date:**	03/18/2013 09:24
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/21/2013 09:28
Workgroup #:	WG424195	**Analyst:**	QX	**Run Date:**	03/21/2013 10:15
Collect Date:	03/09/2013 13:15	**Dilution:**	1	**File ID:**	T2.032113.101524
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	15.2		0.200	0.100

Sample #:	L13030527-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-2 MSD	**Prep Method:**	3015	**Prep Date:**	03/18/2013 06:23
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/18/2013 10:37
Workgroup #:	WG423871	**Analyst:**	JYH	**Run Date:**	03/18/2013 11:55
Collect Date:	03/09/2013 13:15	**Dilution:**	1	**File ID:**	NI.031813.115529
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0670		0.00100	0.000500
Barium, Total	7440-39-3	0.124		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0675		0.000600	0.000300
Chromium, Total	7440-47-3	0.0670		0.00200	0.00100
Copper, Total	7440-50-8	0.0657		0.00200	0.00100
Lead, Total	7439-92-1	0.0672		0.00100	0.000500
Manganese, Total	7439-96-5	0.203		0.00200	0.00100
Nickel, Total	7440-02-0	0.0681		0.00400	0.00200

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Selenium, Total	7782-49-2	0.0668		0.00100	0.000500
Thallium, Total	7440-28-0	0.0664		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0710		0.00100	0.000500
Zinc, Total	7440-66-6	0.0722		0.0250	0.0125

Sample #: L13030527-07
Client ID: MW 4-3
Matrix: Water
Workgroup #: WG423797
Collect Date: 03/09/2013 14:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS11
Prep Date: N/A
Cal Date: 02/08/2013 15:49
Run Date: 03/18/2013 01:39
File ID: 11M90322

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.188	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.934	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	6.12		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	1.03		1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	16.9		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	12.4		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	96.3	86	118	
1,2-Dichloroethane-d4	82.0	80	120	
Toluene-d8	98.7	88	110	
4-Bromofluorobenzene	95.2	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-07 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW 4-3 **Prep Method:** 3005A **Prep Date:** 03/18/2013 09:24
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/20/2013 13:04
Workgroup #: WG424195 **Analyst:** KHR **Run Date:** 03/20/2013 16:50
Collect Date: 03/09/2013 14:10 **Dilution:** 1 **File ID:** T2.032013.165049
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.02		0.100	0.0500
Iron, Total	7439-89-6	1.30		0.100	0.0500
Magnesium, Total	7439-95-4	1.40		0.500	0.250
Potassium, Total	7440-09-7	0.756	J	1.00	0.500
Sodium, Total	7440-23-5	73.5		0.500	0.250
Strontium, Total	7440-24-6	0.0681		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13030527-07 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW 4-3 **Prep Method:** 3005A **Prep Date:** 03/18/2013 09:24
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/21/2013 09:28
Workgroup #: WG424195 **Analyst:** QX **Run Date:** 03/21/2013 10:36
Collect Date: 03/09/2013 14:10 **Dilution:** 1 **File ID:** T2.032113.103602
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	3.87		0.200	0.100

Sample #: L13030527-07 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-3 **Prep Method:** 3015 **Prep Date:** 03/18/2013 07:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/18/2013 15:06
Workgroup #: WG423922 **Analyst:** JYH **Run Date:** 03/18/2013 16:24
Collect Date: 03/09/2013 14:10 **Dilution:** 1 **File ID:** NI.031813.162436
Sample Tag: 01 **Units:** mg/L

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0837		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00847		0.000600	0.000300
Chromium, Total	7440-47-3	0.00526		0.00200	0.00100
Copper, Total	7440-50-8	0.00343		0.00200	0.00100
Lead, Total	7439-92-1	0.000543	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0848		0.00200	0.00100
Nickel, Total	7440-02-0	0.00671		0.00400	0.00200
Selenium, Total	7782-49-2	0.00548		0.00100	0.000500
Thallium, Total	7440-28-0	0.000284		0.000200	0.000100
Vanadium, Total	7440-62-2	0.00446		0.00100	0.000500
Zinc, Total	7440-66-6	0.0646		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-08
Client ID: TRIP BLANK 9MARCH2013
Matrix: Water
Workgroup #: WG423795
Collect Date: 03/09/2013 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/01/2013 15:41
Run Date: 03/17/2013 19:15
File ID: 8M386316

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.5	86	118	
1,2-Dichloroethane-d4	110	80	120	
Toluene-d8	108	88	110	
4-Bromofluorobenzene	108	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-09
Client ID: FIELD BLANK 9MARCH2013
Matrix: Water
Workgroup #: WG423795
Collect Date: 03/09/2013 13:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/01/2013 15:41
Run Date: 03/17/2013 22:46
File ID: 8M386323

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	3.26	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.9	86	118	
1,2-Dichloroethane-d4	111	80	120	
Toluene-d8	110	88	110	
4-Bromofluorobenzene	111	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-09
Client ID: FIELD BLANK 9MARCH2013
Matrix: Water
Workgroup #: WG424195
Collect Date: 03/09/2013 13:50
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/18/2013 09:24
Cal Date: 03/21/2013 09:28
Run Date: 03/21/2013 10:39
File ID: T2.032113.103923

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2		ND	0.200	0.100

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-09
Client ID: FIELD BLANK 9MARCH2013
Matrix: Water
Workgroup #: WG424195
Collect Date: 03/09/2013 13:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/18/2013 09:24
Cal Date: 03/20/2013 13:04
Run Date: 03/20/2013 16:54
File ID: T2.032013.165410

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0100	0.00500

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-09 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: FIELD BLANK 9MARCH2013 **Prep Method:** 3015 **Prep Date:** 03/18/2013 07:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/18/2013 15:06
Workgroup #: WG423922 **Analyst:** JYH **Run Date:** 03/18/2013 16:27
Collect Date: 03/09/2013 13:50 **Dilution:** 1 **File ID:** NI.031813.162759
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00102	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00169	J	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-10 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: 35BWW09 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 03/01/2013 15:41
Workgroup #: WG423795 **Analyst:** ADC **Run Date:** 03/17/2013 23:16
Collect Date: 03/09/2013 16:20 **Dilution:** 1 **File ID:** 8M386324
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.431	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	45.2		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.3	86	118	
1,2-Dichloroethane-d4	110	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	112	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-10
Client ID: 35BWW09
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/09/2013 16:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:21
File ID: P2.031913.132103

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.0764	J	0.100	0.0500
Calcium, Total	7440-70-2	67.1		0.200	0.100
Iron, Total	7439-89-6	0.259		0.100	0.0500
Magnesium, Total	7439-95-4	37.4		0.500	0.250
Potassium, Total	7440-09-7	2.51		1.00	0.500
Strontium, Total	7440-24-6	2.20		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13030527-10 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW09 **Prep Method:** 3005A **Prep Date:** 03/18/2013 13:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/20/2013 09:37
Workgroup #: WG423950 **Analyst:** KHR **Run Date:** 03/20/2013 12:44
Collect Date: 03/09/2013 16:20 **Dilution:** 50 **File ID:** P2.032013.124444
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Sodium, Total	7440-23-5	207		25.0	12.5

Sample #: L13030527-10 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW09 **Prep Method:** 3015 **Prep Date:** 03/18/2013 07:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/18/2013 15:06
Workgroup #: WG423922 **Analyst:** JYH **Run Date:** 03/18/2013 16:31
Collect Date: 03/09/2013 16:20 **Dilution:** 1 **File ID:** NI.031813.163122
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0683		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00126		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00316		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.108		0.00200	0.00100
Nickel, Total	7440-02-0	0.00448		0.00400	0.00200
Selenium, Total	7782-49-2	0.00988		0.00100	0.000500
Thallium, Total	7440-28-0	0.000219		0.000200	0.000100
Vanadium, Total	7440-62-2	0.00112		0.00100	0.000500
Zinc, Total	7440-66-6	0.0183	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-11	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW08	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/01/2013 15:41
Workgroup #:	WG423795	**Analyst:**	ADC	**Run Date:**	03/17/2013 23:46
Collect Date:	03/10/2013 14:30	**Dilution:**	1	**File ID:**	8M386325
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.356	J	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	77.1		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.4	86	118	
1,2-Dichloroethane-d4	110	80	120	
Toluene-d8	110	88	110	
4-Bromofluorobenzene	110	86	115	

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-11 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW08 **Prep Method:** 3005A **Prep Date:** 03/18/2013 13:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/19/2013 09:06
Workgroup #: WG423950 **Analyst:** KHR **Run Date:** 03/19/2013 13:24
Collect Date: 03/10/2013 14:30 **Dilution:** 1 **File ID:** P2.031913.132407
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2	30.4		0.200	0.100
Iron, Total	7439-89-6	0.121		0.100	0.0500
Magnesium, Total	7439-95-4	18.2		0.500	0.250
Potassium, Total	7440-09-7	1.29		1.00	0.500
Sodium, Total	7440-23-5	144		0.500	0.250
Strontium, Total	7440-24-6	1.15		0.0100	0.00500

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-11 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW08 **Prep Method:** 3015 **Prep Date:** 03/18/2013 07:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/18/2013 15:06
Workgroup #: WG423922 **Analyst:** JYH **Run Date:** 03/18/2013 16:34
Collect Date: 03/10/2013 14:30 **Dilution:** 1 **File ID:** NI.031813.163444
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0539		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00190		0.000600	0.000300
Chromium, Total	7440-47-3	0.00173	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00305		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0139		0.00200	0.00100
Nickel, Total	7440-02-0	0.00236	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0355		0.00100	0.000500
Thallium, Total	7440-28-0	0.000248		0.000200	0.000100
Vanadium, Total	7440-62-2	0.00104		0.00100	0.000500
Zinc, Total	7440-66-6	0.0128	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-12
Client ID: 35BWW08D
Matrix: Water
Workgroup #: WG423795
Collect Date: 03/10/2013 14:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/01/2013 15:41
Run Date: 03/18/2013 00:17
File ID: 8M386326

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500

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Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2	0.353	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	78.2		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.3	86	118	
1,2-Dichloroethane-d4	111	80	120	
Toluene-d8	106	88	110	

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Lab Report #: L13030527
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Lab Contact: Stephanie Mossburg

Certificate of Analysis

4-Bromofluorobenzene	112	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-12
Client ID: 35BWW08D
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/10/2013 14:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:27
File ID: P2.031913.132710

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2	30.8		0.200	0.100
Iron, Total	7439-89-6	0.0891	J	0.100	0.0500
Magnesium, Total	7439-95-4	18.2		0.500	0.250
Potassium, Total	7440-09-7	1.27		1.00	0.500
Sodium, Total	7440-23-5	143		0.500	0.250
Strontium, Total	7440-24-6	1.14		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-12
Client ID: 35BWW08D
Matrix: Water
Workgroup #: WG423922
Collect Date: 03/10/2013 14:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/18/2013 07:17
Cal Date: 03/18/2013 15:06
Run Date: 03/18/2013 16:38
File ID: NI.031813.163807

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0578		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00158		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00179	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0115		0.00200	0.00100
Nickel, Total	7440-02-0	0.00246	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0524		0.00100	0.000500
Thallium, Total	7440-28-0	0.000217		0.000200	0.000100
Vanadium, Total	7440-62-2	0.000911	J	0.00100	0.000500

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-13
Client ID: MW1-1
Matrix: Water
Workgroup #: WG423795
Collect Date: 03/10/2013 16:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/01/2013 15:41
Run Date: 03/18/2013 00:47
File ID: 8M386327

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250

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Lab Report #: L13030527
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Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	24.8		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q

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Dibromofluoromethane	93.3	86	118	
1,2-Dichloroethane-d4	110	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	112	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-13 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW1-1 **Prep Method:** 3005A **Prep Date:** 03/18/2013 13:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/19/2013 09:06
Workgroup #: WG423950 **Analyst:** KHR **Run Date:** 03/19/2013 13:30
Collect Date: 03/10/2013 16:00 **Dilution:** 1 **File ID:** P2.031913.133014
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2	17.2		0.200	0.100
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	9.83		0.500	0.250
Potassium, Total	7440-09-7	0.979	J	1.00	0.500
Sodium, Total	7440-23-5	116		0.500	0.250
Strontium, Total	7440-24-6	0.593		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-13 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW1-1 **Prep Method:** 3015 **Prep Date:** 03/18/2013 07:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/18/2013 15:06
Workgroup #: WG423922 **Analyst:** JYH **Run Date:** 03/18/2013 16:41
Collect Date: 03/10/2013 16:00 **Dilution:** 1 **File ID:** NI.031813.164129
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0627		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000503	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00109	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0198		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0310		0.00100	0.000500

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Thallium, Total	7440-28-0	0.000240		0.000200	0.000100
Vanadium, Total	7440-62-2	0.00156		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-14
Client ID: TRIP BLANK 10MARCH2013
Matrix: Water
Workgroup #: WG423795
Collect Date: 03/10/2013 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/01/2013 15:41
Run Date: 03/17/2013 19:45
File ID: 8M386317

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.9	86	118	
1,2-Dichloroethane-d4	113	80	120	
Toluene-d8	108	88	110	
4-Bromofluorobenzene	105	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-15
Client ID: MW1-2
Matrix: Water
Workgroup #: WG423795
Collect Date: 03/11/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/01/2013 15:41
Run Date: 03/18/2013 01:17
File ID: 8M386328

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	8.96		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	91.3	86	118	
1,2-Dichloroethane-d4	107	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	110	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-15
Client ID: MW1-2
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/11/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:33
File ID: P2.031913.133317

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2	9.31		0.200	0.100
Iron, Total	7439-89-6	0.0516	J	0.100	0.0500
Magnesium, Total	7439-95-4	4.99		0.500	0.250
Potassium, Total	7440-09-7	4.35		1.00	0.500
Sodium, Total	7440-23-5	96.9		0.500	0.250
Strontium, Total	7440-24-6	0.901		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-15
Client ID: MW1-2
Matrix: Water
Workgroup #: WG423922
Collect Date: 03/11/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/18/2013 07:17
Cal Date: 03/18/2013 15:06
Run Date: 03/18/2013 16:44
File ID: NI.031813.164452

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0798		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100

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Analyte	CAS #	Result	Qual	RL	MDL
Copper, Total	7440-50-8	0.00179	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0814		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0243		0.00100	0.000500
Thallium, Total	7440-28-0	0.000134	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00133		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-16
Client ID: TRIP BLANK 11MARCH2013
Matrix: Water
Workgroup #: WG423795
Collect Date: 03/11/2013 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/01/2013 15:41
Run Date: 03/17/2013 20:16
File ID: 8M386318

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.8	86	118	
1,2-Dichloroethane-d4	111	80	120	
Toluene-d8	108	88	110	
4-Bromofluorobenzene	110	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-17
Client ID: FIELD BLANK 11MARCH2013
Matrix: Water
Workgroup #: WG423959
Collect Date: 03/11/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 02/27/2013 15:40
Run Date: 03/19/2013 11:03
File ID: 6M114766

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	3.39	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.9	86	118	
1,2-Dichloroethane-d4	91.6	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	109	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-17
Client ID: FIELD BLANK 11MARCH2013
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/11/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:36
File ID: P2.031913.133620

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2		ND	0.200	0.100
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0100	0.00500

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	FIELD BLANK 11MARCH2013	**Prep Method:**	3015	**Prep Date:**	03/18/2013 07:17
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/18/2013 15:06
Workgroup #:	WG423922	**Analyst:**	JYH	**Run Date:**	03/18/2013 16:48
Collect Date:	03/11/2013 09:30	**Dilution:**	1	**File ID:**	NI.031813.164814
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00130	J	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L13030527-18	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW2-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/27/2013 15:40
Workgroup #:	WG423959	**Analyst:**	TMB	**Run Date:**	03/19/2013 12:07
Collect Date:	03/11/2013 12:30	**Dilution:**	1	**File ID:**	6M114768
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	3.17		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.78		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	93.9	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	109	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-18
Client ID: MW2-1
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/11/2013 12:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:39
File ID: P2.031913.133919

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.406		0.100	0.0500
Calcium, Total	7440-70-2	5.07		0.200	0.100
Iron, Total	7439-89-6	0.517		0.100	0.0500
Magnesium, Total	7439-95-4	2.13		0.500	0.250
Potassium, Total	7440-09-7	0.741	J	1.00	0.500
Sodium, Total	7440-23-5	31.3		0.500	0.250
Strontium, Total	7440-24-6	0.153		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13030527-18 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW2-1 **Prep Method:** 3015 **Prep Date:** 03/18/2013 07:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/18/2013 15:06
Workgroup #: WG423922 **Analyst:** JYH **Run Date:** 03/18/2013 16:51
Collect Date: 03/11/2013 12:30 **Dilution:** 1 **File ID:** NI.031813.165137
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0587		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00110	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.148		0.00200	0.00100
Nickel, Total	7440-02-0	0.00414		0.00400	0.00200
Selenium, Total	7782-49-2	0.00122		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00133		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-19 **PrePrep Method:** N/A **Instrument:** HPMS6
Client ID: MW2-2 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 02/27/2013 15:40
Workgroup #: WG423959 **Analyst:** TMB **Run Date:** 03/19/2013 12:39
Collect Date: 03/11/2013 13:40 **Dilution:** 1 **File ID:** 6M114769
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50

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Analyte	CAS #	Result	Qual	RL	MDL
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200

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Analyte	CAS #	Result	Qual	RL	MDL
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.312	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	93.8	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	109	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-19
Client ID: MW2-2
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/11/2013 13:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/18/2013 17:05
Run Date: 03/18/2013 18:33
File ID: P2.031813.183356

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	10.3		0.100	0.0500
Calcium, Total	7440-70-2	3.31		0.200	0.100
Iron, Total	7439-89-6	11.7		0.100	0.0500
Magnesium, Total	7439-95-4	2.29		0.500	0.250
Potassium, Total	7440-09-7	1.72		1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
Sodium, Total	7440-23-5	31.6		0.500	0.250
Strontium, Total	7440-24-6	0.111		0.0100	0.00500

Sample #: L13030527-19 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW2-2 **Prep Method:** 3015 **Prep Date:** 03/19/2013 06:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/21/2013 09:47
Workgroup #: WG423996 **Analyst:** JYH **Run Date:** 03/21/2013 10:27
Collect Date: 03/11/2013 13:40 **Dilution:** 1 **File ID:** NI.032113.102712
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.138		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00219		0.000600	0.000300
Chromium, Total	7440-47-3	0.0110		0.00200	0.00100
Copper, Total	7440-50-8	0.00740		0.00200	0.00100
Lead, Total	7439-92-1	0.00542		0.00100	0.000500
Manganese, Total	7439-96-5	0.0596		0.00200	0.00100
Nickel, Total	7440-02-0	0.0140		0.00400	0.00200
Selenium, Total	7782-49-2	0.000743	J	0.00100	0.000500
Thallium, Total	7440-28-0	0.000173	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0211		0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-19 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW2-2 **Prep Method:** 3015 **Prep Date:** 03/19/2013 06:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/21/2013 09:47
Workgroup #: WG423996 **Analyst:** JYH **Run Date:** 03/21/2013 11:15
Collect Date: 03/11/2013 13:40 **Dilution:** 2 **File ID:** NI.032113.111514
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.266		0.0500	0.0250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-20	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW2-2 MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/27/2013 15:40
Workgroup #:	WG423959	**Analyst:**	TMB	**Run Date:**	03/19/2013 08:58
Collect Date:	03/11/2013 13:50	**Dilution:**	1	**File ID:**	6M114762
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	16.4		10.0	2.50
Benzene	71-43-2	20.5		1.00	0.125
Bromobenzene	108-86-1	20.6		1.00	0.125
Bromochloromethane	74-97-5	20.3		1.00	0.200
Bromodichloromethane	75-27-4	19.7		1.00	0.250
Bromoform	75-25-2	16.3		1.00	0.500
Bromomethane	74-83-9	19.1		1.00	0.500
2-Butanone	78-93-3	20.1		10.0	2.50
n-Butylbenzene	104-51-8	21.3		1.00	0.250
sec-Butylbenzene	135-98-8	18.7		1.00	0.250
tert-Butylbenzene	98-06-6	18.4		1.00	0.250
Carbon disulfide	75-15-0	18.7		1.00	0.500
Carbon tetrachloride	56-23-5	20.0		1.00	0.250
Chlorobenzene	108-90-7	17.7		1.00	0.125
Chlorodibromomethane	124-48-1	16.9		1.00	0.250
Chloroethane	75-00-3	24.7		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	19.6		1.00	0.125
Chloromethane	74-87-3	18.8		1.00	0.500
2-Chlorotoluene	95-49-8	19.0		1.00	0.125
4-Chlorotoluene	106-43-4	17.9		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	17.8		5.00	1.00
1,2-Dibromoethane	106-93-4	19.7		1.00	0.250
Dibromomethane	74-95-3	18.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.3		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.0		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.1		1.00	0.125
Dichlorodifluoromethane	75-71-8	34.4		1.00	0.250
1,1-Dichloroethane	75-34-3	21.1		1.00	0.125
1,2-Dichloroethane	107-06-2	18.7		1.00	0.250
1,1-Dichloroethene	75-35-4	20.6		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.6		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	21.4		1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	22.7		1.00	0.200
1,3-Dichloropropane	142-28-9	20.5		1.00	0.200
2,2-Dichloropropane	594-20-7	19.6		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	19.7		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	16.5		1.00	0.500
1,1-Dichloropropene	563-58-6	20.7		1.00	0.250
Ethylbenzene	100-41-4	18.6		1.00	0.250
2-Hexanone	591-78-6	17.6		10.0	2.50
Hexachlorobutadiene	87-68-3	19.8		1.00	0.250
Isopropylbenzene	98-82-8	18.0		1.00	0.250
p-Isopropyltoluene	99-87-6	19.0		1.00	0.250
4-Methyl-2-pentanone	108-10-1	19.3		10.0	2.50
Methylene chloride	75-09-2	20.0		5.00	0.250
Naphthalene	91-20-3	20.7		1.00	0.200
n-Propylbenzene	103-65-1	19.1		1.00	0.125
Styrene	100-42-5	17.1		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	16.3		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	22.0		1.00	0.200
Tetrachloroethene	127-18-4	18.5		1.00	0.250
Toluene	108-88-3	19.7		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	20.0		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	20.3		1.00	0.200
1,1,1-Trichloroethane	71-55-6	19.5		1.00	0.250
1,1,2-Trichloroethane	79-00-5	20.0		1.00	0.250
Trichloroethene	79-01-6	21.9		1.00	0.250
Trichlorofluoromethane	75-69-4	21.8		1.00	0.250
1,2,3-Trichloropropane	96-18-4	20.2		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.0		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	20.5		1.00	0.250
Vinyl acetate	108-05-4	24.4		10.0	2.50
Vinyl chloride	75-01-4	18.1		1.00	0.250
o-Xylene	95-47-6	17.5		1.00	0.250
m-,p-Xylene	179601-23-1	36.4		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.7	86	118	
1,2-Dichloroethane-d4	92.0	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	109	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-20	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MW2-2 MS	**Prep Method:**	3005A	**Prep Date:**	03/18/2013 13:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/18/2013 17:05
Workgroup #:	WG423950	**Analyst:**	KHR	**Run Date:**	03/18/2013 18:35
Collect Date:	03/11/2013 13:50	**Dilution:**	1	**File ID:**	P2.031813.183558
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	20.9		0.100	0.0500
Calcium, Total	7440-70-2	7.92		0.200	0.100
Iron, Total	7439-89-6	13.1		0.100	0.0500
Magnesium, Total	7439-95-4	7.02		0.500	0.250
Potassium, Total	7440-09-7	25.8		1.00	0.500
Sodium, Total	7440-23-5	55.2		0.500	0.250
Strontium, Total	7440-24-6	0.590		0.0100	0.00500

Sample #:	L13030527-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-2 MS	**Prep Method:**	3015	**Prep Date:**	03/19/2013 06:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/21/2013 09:47
Workgroup #:	WG423996	**Analyst:**	JYH	**Run Date:**	03/21/2013 10:30
Collect Date:	03/11/2013 13:50	**Dilution:**	1	**File ID:**	NI.032113.103035
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0409		0.00100	0.000500
Barium, Total	7440-39-3	0.191		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0626		0.000600	0.000300
Chromium, Total	7440-47-3	0.0662		0.00200	0.00100
Copper, Total	7440-50-8	0.0671		0.00200	0.00100
Lead, Total	7439-92-1	0.0668		0.00100	0.000500
Manganese, Total	7439-96-5	0.108		0.00200	0.00100
Nickel, Total	7440-02-0	0.0722		0.00400	0.00200
Selenium, Total	7782-49-2	0.0550		0.00100	0.000500
Thallium, Total	7440-28-0	0.0620		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0729		0.00100	0.000500

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Lab Project #: 3083.001
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Lab Contact: Stephanie Mossburg

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Sample #:	L13030527-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-2 MS	**Prep Method:**	3015	**Prep Date:**	03/19/2013 06:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/21/2013 09:47
Workgroup #:	WG423996	**Analyst:**	JYH	**Run Date:**	03/21/2013 11:18
Collect Date:	03/11/2013 13:50	**Dilution:**	2	**File ID:**	NI.032113.111836
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.382		0.0500	0.0250

Sample #:	L13030527-21	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW2-2 MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/27/2013 15:40
Workgroup #:	WG423959	**Analyst:**	TMB	**Run Date:**	03/19/2013 09:28
Collect Date:	03/11/2013 14:00	**Dilution:**	1	**File ID:**	6M114763
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	15.2		10.0	2.50
Benzene	71-43-2	21.1		1.00	0.125
Bromobenzene	108-86-1	20.8		1.00	0.125
Bromochloromethane	74-97-5	20.8		1.00	0.200
Bromodichloromethane	75-27-4	20.3		1.00	0.250
Bromoform	75-25-2	16.8		1.00	0.500
Bromomethane	74-83-9	20.1		1.00	0.500
2-Butanone	78-93-3	20.4		10.0	2.50
n-Butylbenzene	104-51-8	21.6		1.00	0.250
sec-Butylbenzene	135-98-8	18.9		1.00	0.250
tert-Butylbenzene	98-06-6	18.4		1.00	0.250
Carbon disulfide	75-15-0	18.5		1.00	0.500
Carbon tetrachloride	56-23-5	20.0		1.00	0.250
Chlorobenzene	108-90-7	18.1		1.00	0.125
Chlorodibromomethane	124-48-1	17.1		1.00	0.250
Chloroethane	75-00-3	25.1		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.2		1.00	0.125
Chloromethane	74-87-3	19.2		1.00	0.500
2-Chlorotoluene	95-49-8	18.9		1.00	0.125
4-Chlorotoluene	106-43-4	18.7		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	18.2		5.00	1.00
1,2-Dibromoethane	106-93-4	20.0		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Dibromomethane	74-95-3	19.3		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.8		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.3		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.5		1.00	0.125
Dichlorodifluoromethane	75-71-8	33.0		1.00	0.250
1,1-Dichloroethane	75-34-3	21.5		1.00	0.125
1,2-Dichloroethane	107-06-2	19.1		1.00	0.250
1,1-Dichloroethene	75-35-4	20.6		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	21.3		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	21.7		1.00	0.250
1,2-Dichloropropane	78-87-5	23.4		1.00	0.200
1,3-Dichloropropane	142-28-9	20.9		1.00	0.200
2,2-Dichloropropane	594-20-7	20.0		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.4		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	16.6		1.00	0.500
1,1-Dichloropropene	563-58-6	20.8		1.00	0.250
Ethylbenzene	100-41-4	18.9		1.00	0.250
2-Hexanone	591-78-6	17.8		10.0	2.50
Hexachlorobutadiene	87-68-3	20.3		1.00	0.250
Isopropylbenzene	98-82-8	18.2		1.00	0.250
p-Isopropyltoluene	99-87-6	19.3		1.00	0.250
4-Methyl-2-pentanone	108-10-1	19.9		10.0	2.50
Methylene chloride	75-09-2	20.4		5.00	0.250
Naphthalene	91-20-3	20.6		1.00	0.200
n-Propylbenzene	103-65-1	19.4		1.00	0.125
Styrene	100-42-5	17.4		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	16.9		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	22.7		1.00	0.200
Tetrachloroethene	127-18-4	18.6		1.00	0.250
Toluene	108-88-3	20.0		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	20.3		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	20.5		1.00	0.200
1,1,1-Trichloroethane	71-55-6	19.8		1.00	0.250
1,1,2-Trichloroethane	79-00-5	20.2		1.00	0.250
Trichloroethene	79-01-6	22.4		1.00	0.250
Trichlorofluoromethane	75-69-4	21.2		1.00	0.250
1,2,3-Trichloropropane	96-18-4	19.9		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.4		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	20.9		1.00	0.250

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Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl acetate	108-05-4	24.9		10.0	2.50
Vinyl chloride	75-01-4	18.2		1.00	0.250
o-Xylene	95-47-6	17.7		1.00	0.250
m-,p-Xylene	179601-23-1	36.8		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.7	86	118	
1,2-Dichloroethane-d4	90.9	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	109	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-21
Client ID: MW2-2 MSD
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/11/2013 14:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/18/2013 17:05
Run Date: 03/18/2013 18:38
File ID: P2.031813.183801

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	19.9		0.100	0.0500
Calcium, Total	7440-70-2	8.22		0.200	0.100
Iron, Total	7439-89-6	12.5		0.100	0.0500
Magnesium, Total	7439-95-4	7.16		0.500	0.250
Potassium, Total	7440-09-7	26.9		1.00	0.500
Sodium, Total	7440-23-5	57.9		0.500	0.250
Strontium, Total	7440-24-6	0.609		0.0100	0.00500

Sample #: L13030527-21
Client ID: MW2-2 MSD
Matrix: Water
Workgroup #: WG423996
Collect Date: 03/11/2013 14:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/19/2013 06:26
Cal Date: 03/21/2013 09:47
Run Date: 03/21/2013 10:33
File ID: NI.032113.103357

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0535		0.00100	0.000500
Barium, Total	7440-39-3	0.174		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0650		0.000600	0.000300
Chromium, Total	7440-47-3	0.0730		0.00200	0.00100
Copper, Total	7440-50-8	0.0712		0.00200	0.00100

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Lead, Total	7439-92-1	0.0709		0.00100	0.000500
Manganese, Total	7439-96-5	0.117		0.00200	0.00100
Nickel, Total	7440-02-0	0.0796		0.00400	0.00200
Selenium, Total	7782-49-2	0.0626		0.00100	0.000500
Thallium, Total	7440-28-0	0.0650		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0830		0.00100	0.000500

Sample #: L13030527-21 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW2-2 MSD **Prep Method:** 3015 **Prep Date:** 03/19/2013 06:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/21/2013 09:47
Workgroup #: WG423996 **Analyst:** JYH **Run Date:** 03/21/2013 11:21
Collect Date: 03/11/2013 14:00 **Dilution:** 2 **File ID:** NI.032113.112159
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.355		0.0500	0.0250

Sample #: L13030527-22 **PrePrep Method:** N/A **Instrument:** HPMS6
Client ID: MW2-3 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 02/27/2013 15:40
Workgroup #: WG423959 **Analyst:** TMB **Run Date:** 03/19/2013 13:11
Collect Date: 03/11/2013 15:30 **Dilution:** 1 **File ID:** 6M114770
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250

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Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150

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Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.915	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	94.6	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	110	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-22
Client ID: MW2-3
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/11/2013 15:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:42
File ID: P2.031913.134219

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.05		0.100	0.0500
Calcium, Total	7440-70-2	1.36		0.200	0.100
Iron, Total	7439-89-6	1.03		0.100	0.0500
Magnesium, Total	7439-95-4	0.786		0.500	0.250
Potassium, Total	7440-09-7	0.680	J	1.00	0.500
Sodium, Total	7440-23-5	29.8		0.500	0.250
Strontium, Total	7440-24-6	0.0413		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Sample #:	L13030527-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-3	**Prep Method:**	3015	**Prep Date:**	03/19/2013 06:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/21/2013 09:47
Workgroup #:	WG423996	**Analyst:**	JYH	**Run Date:**	03/21/2013 10:37
Collect Date:	03/11/2013 15:30	**Dilution:**	1	**File ID:**	NI.032113.103719
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0511		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000466	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00112	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0314		0.00200	0.00100
Nickel, Total	7440-02-0	0.00240	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000820	J	0.00100	0.000500
Thallium, Total	7440-28-0	0.000118	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00173		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L13030527-23	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW3-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/27/2013 15:40
Workgroup #:	WG423959	**Analyst:**	TMB	**Run Date:**	03/19/2013 13:44
Collect Date:	03/12/2013 09:15	**Dilution:**	1	**File ID:**	6M114771
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Lab Project #: 3083.001
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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	22.1		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.57		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	93.8	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	109	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-23
Client ID: MW3-1
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/12/2013 09:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:45
File ID: P2.031913.134519

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.192		0.100	0.0500
Calcium, Total	7440-70-2	16.5		0.200	0.100
Iron, Total	7439-89-6	0.0975	J	0.100	0.0500
Magnesium, Total	7439-95-4	6.29		0.500	0.250
Potassium, Total	7440-09-7	8.37		1.00	0.500
Sodium, Total	7440-23-5	90.8		0.500	0.250
Strontium, Total	7440-24-6	1.02		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

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Sample #:	L13030527-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW3-1	**Prep Method:**	3015	**Prep Date:**	03/19/2013 06:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/21/2013 09:47
Workgroup #:	WG423996	**Analyst:**	JYH	**Run Date:**	03/21/2013 10:55
Collect Date:	03/12/2013 09:15	**Dilution:**	1	**File ID:**	NI.032113.105500
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0711		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00150	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0346		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.000742	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0123		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L13030527-24	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW3-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/27/2013 15:40
Workgroup #:	WG423959	**Analyst:**	TMB	**Run Date:**	03/19/2013 14:16
Collect Date:	03/12/2013 11:00	**Dilution:**	1	**File ID:**	6M114772
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.230	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.651	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	27.1		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.14		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	95.5	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	109	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-24
Client ID: MW3-2
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/12/2013 11:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:53
File ID: P2.031913.135347

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2	9.87		0.200	0.100
Iron, Total	7439-89-6	0.0839	J	0.100	0.0500
Magnesium, Total	7439-95-4	5.06		0.500	0.250
Potassium, Total	7440-09-7	1.10		1.00	0.500
Sodium, Total	7440-23-5	27.3		0.500	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Strontium, Total	7440-24-6	0.303		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-24 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW3-2 **Prep Method:** 3015 **Prep Date:** 03/19/2013 06:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/21/2013 09:47
Workgroup #: WG423996 **Analyst:** JYH **Run Date:** 03/21/2013 10:58
Collect Date: 03/12/2013 11:00 **Dilution:** 1 **File ID:** NI.032113.105822
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.138		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000396	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0333		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00107		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00113		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-25 **PrePrep Method:** N/A **Instrument:** HPMS6
Client ID: MW3-2 D **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 02/27/2013 15:40
Workgroup #: WG423959 **Analyst:** TMB **Run Date:** 03/19/2013 14:49
Collect Date: 03/12/2013 11:15 **Dilution:** 1 **File ID:** 6M114773
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.191	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.674	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	27.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.09		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	93.9	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	109	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-25
Client ID: MW3-2 D
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/12/2013 11:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 13:56
File ID: P2.031913.135646

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2	9.70		0.200	0.100

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Analyte	CAS #	Result	Qual	RL	MDL
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	4.99		0.500	0.250
Potassium, Total	7440-09-7	0.951	J	1.00	0.500
Sodium, Total	7440-23-5	27.7		0.500	0.250
Strontium, Total	7440-24-6	0.303		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-25 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW3-2 D **Prep Method:** 3015 **Prep Date:** 03/20/2013 12:44
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/22/2013 09:14
Workgroup #: WG424231 **Analyst:** JYH **Run Date:** 03/22/2013 12:52
Collect Date: 03/12/2013 11:15 **Dilution:** 1 **File ID:** NI.032213.125254
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.134		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0314		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00110		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000997	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-26 **PrePrep Method:** N/A **Instrument:** HPMS6
Client ID: TRIP BLANK 12MARCH2013 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 02/27/2013 15:40
Workgroup #: WG423959 **Analyst:** TMB **Run Date:** 03/19/2013 10:31
Collect Date: 03/12/2013 00:01 **Dilution:** 1 **File ID:** 6M114765
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.0	86	118	
1,2-Dichloroethane-d4	90.5	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	109	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-27
Client ID: MW3-3
Matrix: Water
Workgroup #: WG423959
Collect Date: 03/12/2013 13:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 02/27/2013 15:40
Run Date: 03/19/2013 15:22
File ID: 6M114774

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	2.71	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.359	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.745	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.691	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	38.0		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.49		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	94.6	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	110	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-27	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MW3-3	**Prep Method:**	3005A	**Prep Date:**	03/18/2013 13:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/19/2013 09:06
Workgroup #:	WG423950	**Analyst:**	KHR	**Run Date:**	03/19/2013 13:59
Collect Date:	03/12/2013 13:15	**Dilution:**	1	**File ID:**	P2.031913.135949
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.34		0.100	0.0500
Calcium, Total	7440-70-2	5.51		0.200	0.100
Iron, Total	7439-89-6	1.70		0.100	0.0500
Magnesium, Total	7439-95-4	1.52		0.500	0.250
Potassium, Total	7440-09-7	3.27		1.00	0.500
Sodium, Total	7440-23-5	52.2		0.500	0.250
Strontium, Total	7440-24-6	0.413		0.0100	0.00500

Sample #:	L13030527-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW3-3	**Prep Method:**	3015	**Prep Date:**	03/20/2013 12:44
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/22/2013 09:14
Workgroup #:	WG424231	**Analyst:**	JYH	**Run Date:**	03/22/2013 13:13
Collect Date:	03/12/2013 13:15	**Dilution:**	1	**File ID:**	NI.032213.131328
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0697		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00211		0.000600	0.000300
Chromium, Total	7440-47-3	0.00665		0.00200	0.00100
Copper, Total	7440-50-8	0.00295		0.00200	0.00100
Lead, Total	7439-92-1	0.000757	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.147		0.00200	0.00100
Nickel, Total	7440-02-0	0.00307	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000961	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00536		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13030527-28	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	FIELD BLANK 12MARCH2013	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/27/2013 15:40
Workgroup #:	WG423959	**Analyst:**	TMB	**Run Date:**	03/19/2013 11:35
Collect Date:	03/12/2013 12:25	**Dilution:**	1	**File ID:**	6M114767
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	3.21	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	92.4	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	109	86	115	

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-28
Client ID: FIELD BLANK 12MARCH2013
Matrix: Water
Workgroup #: WG423950
Collect Date: 03/12/2013 12:25
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 03/18/2013 13:59
Cal Date: 03/19/2013 09:06
Run Date: 03/19/2013 14:02
File ID: P2.031913.140248

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2		ND	0.200	0.100
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0100	0.00500

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-28
Client ID: FIELD BLANK 12MARCH2013
Matrix: Water
Workgroup #: WG424231
Collect Date: 03/12/2013 12:25
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/20/2013 12:44
Cal Date: 03/22/2013 09:14
Run Date: 03/22/2013 13:16
File ID: NI.032213.131651

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00127	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-29
Client ID: MW-58
Matrix: Water
Workgroup #: WG423959
Collect Date: 03/12/2013 14:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 02/27/2013 15:40
Run Date: 03/19/2013 15:54
File ID: 6M114775

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	14.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.39		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	95.7	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	108	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-29 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW-58 **Prep Method:** 3005A **Prep Date:** 03/19/2013 16:43
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/22/2013 11:46
Workgroup #: WG424109 **Analyst:** QX **Run Date:** 03/22/2013 17:13
Collect Date: 03/12/2013 14:45 **Dilution:** 1 **File ID:** T2.032213.171325
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.149		0.100	0.0500
Calcium, Total	7440-70-2	17.9		0.200	0.100
Iron, Total	7439-89-6	0.177		0.100	0.0500
Magnesium, Total	7439-95-4	7.42		0.500	0.250
Potassium, Total	7440-09-7	1.39		1.00	0.500
Sodium, Total	7440-23-5	76.1		0.500	0.250
Strontium, Total	7440-24-6	0.386		0.0100	0.00500

Sample #: L13030527-29 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW-58 **Prep Method:** 3015 **Prep Date:** 03/20/2013 12:44
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/22/2013 09:14
Workgroup #: WG424231 **Analyst:** JYH **Run Date:** 03/22/2013 13:20
Collect Date: 03/12/2013 14:45 **Dilution:** 1 **File ID:** NI.032213.132014
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.171		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00645		0.00200	0.00100
Copper, Total	7440-50-8	0.00319		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00884		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00127		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00157		0.00100	0.000500

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-30
Client ID: 35BWW04
Matrix: Water
Workgroup #: WG423959
Collect Date: 03/12/2013 15:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 02/27/2013 15:40
Run Date: 03/19/2013 16:27
File ID: 6M114776

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.169	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	2.11		1.00	0.125

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloroethane	107-06-2	0.299	J	1.00	0.250
1,1-Dichloroethene	75-35-4	2.94		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	1.05		1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	45.4		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	15.4		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	86	118	

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1,2-Dichloroethane-d4	96.3	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	109	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-30 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW04 **Prep Method:** 3005A **Prep Date:** 03/19/2013 16:43
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/22/2013 11:46
Workgroup #: WG424109 **Analyst:** QX **Run Date:** 03/22/2013 17:16
Collect Date: 03/12/2013 15:50 **Dilution:** 1 **File ID:** T2.032213.171647
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.229		0.100	0.0500
Calcium, Total	7440-70-2	8.95		0.200	0.100
Iron, Total	7439-89-6	0.327		0.100	0.0500
Magnesium, Total	7439-95-4	4.78		0.500	0.250
Potassium, Total	7440-09-7	0.815	J	1.00	0.500
Sodium, Total	7440-23-5	67.8		0.500	0.250
Strontium, Total	7440-24-6	0.286		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13030527-30 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW04 **Prep Method:** 3015 **Prep Date:** 03/20/2013 12:44
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/22/2013 09:14
Workgroup #: WG424231 **Analyst:** JYH **Run Date:** 03/22/2013 13:23
Collect Date: 03/12/2013 15:50 **Dilution:** 1 **File ID:** NI.032213.132336
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0689		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000628		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00476		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.000927	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100

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Lab Contact: Stephanie Mossburg

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Analyte	CAS #	Result	Qual	RL	MDL
Vanadium, Total	7440-62-2	0.00184		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-31
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG423959
Collect Date: 03/13/2013 09:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 02/27/2013 15:40
Run Date: 03/19/2013 17:00
File ID: 6M114777

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

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Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	95.4	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	109	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-31
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG424109
Collect Date: 03/13/2013 09:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/19/2013 16:43
Cal Date: 03/22/2013 11:46
Run Date: 03/22/2013 17:20
File ID: T2.032213.172010

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.100	0.0500
Calcium, Total	7440-70-2	68.9		0.200	0.100
Iron, Total	7439-89-6	1.93		0.100	0.0500
Magnesium, Total	7439-95-4	24.9		0.500	0.250
Potassium, Total	7440-09-7	2.66		1.00	0.500
Sodium, Total	7440-23-5	186		0.500	0.250
Strontium, Total	7440-24-6	2.51		0.0100	0.00500

ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-31
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG424231
Collect Date: 03/13/2013 09:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/20/2013 12:44
Cal Date: 03/22/2013 09:14
Run Date: 03/22/2013 13:26
File ID: NI.032213.132659

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0735		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00196	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000806	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.183		0.00200	0.00100
Nickel, Total	7440-02-0	0.00271	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00434		0.00100	0.000500

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Analyte	CAS #	Result	Qual	RL	MDL
Thallium, Total	7440-28-0	0.000138	J	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6	0.0231	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-32
Client ID: 35BWW05
Matrix: Water
Workgroup #: WG423959
Collect Date: 03/13/2013 10:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 02/27/2013 15:40
Run Date: 03/19/2013 17:32
File ID: 6M114778

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.255	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	0.998	J	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	15.6		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	95.4	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	110	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13030527-32
Client ID: 35BWW05
Matrix: Water
Workgroup #: WG424109
Collect Date: 03/13/2013 10:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3005A
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/19/2013 16:43
Cal Date: 03/22/2013 11:46
Run Date: 03/22/2013 17:23
File ID: T2.032213.172340

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.422		0.100	0.0500
Calcium, Total	7440-70-2	11.3		0.200	0.100
Iron, Total	7439-89-6	1.70		0.100	0.0500
Magnesium, Total	7439-95-4	6.53		0.500	0.250
Potassium, Total	7440-09-7	0.752	J	1.00	0.500
Sodium, Total	7440-23-5	60.4		0.500	0.250
Strontium, Total	7440-24-6	0.416		0.0100	0.00500

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13030527-32
Client ID: 35BWW05
Matrix: Water
Workgroup #: WG424231
Collect Date: 03/13/2013 10:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/20/2013 12:44
Cal Date: 03/22/2013 09:14
Run Date: 03/22/2013 13:30
File ID: NI.032213.133022

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0553		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000517	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500

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Lab Report #: L13030527
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.0542		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.000881	J	0.00100	0.000500
Thallium, Total	7440-28-0	0.000108	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00153		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG423797
Blank File ID: 11M90303
Blank Sample ID: WG423797-01
Prep Date: 03/17/13 15:42
Instrument ID: HPMS11
Analyzed Date: 03/17/13 15:42
Method: 8260B
Analyst: ADC

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423797-02	11M90304	03/17/13 16:13	01
MW 4-2 MS	L13030527-05	11M90305	03/17/13 16:45	01
MW 4-2 MSD	L13030527-06	11M90306	03/17/13 17:16	01
35BWW14	L13030527-01	11M90318	03/17/13 23:33	01
MW 4-1	L13030527-02	11M90319	03/18/13 00:05	01
MW 4-2	L13030527-03	11M90320	03/18/13 00:36	01
MW 4-2 D	L13030527-04	11M90321	03/18/13 01:07	01
MW 4-3	L13030527-07	11M90322	03/18/13 01:39	01

Report Name: BLANK_SUMMARY
PDF File ID: 2799938
Report generated 03/25/2013 11:31

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG423959
Blank File ID: 6M114760
Blank Sample ID: WG423959-01
Prep Date: 03/19/13 07:55
Instrument ID: HPMS6
Analyzed Date: 03/19/13 07:55
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423959-02	6M114761	03/19/13 08:26	01
MW2-2 MS	L13030527-20	6M114762	03/19/13 08:58	01
MW2-2 MSD	L13030527-21	6M114763	03/19/13 09:28	01
TRIP BLANK 12MARCH2013	L13030527-26	6M114765	03/19/13 10:31	01
FIELD BLANK 11MARCH2013	L13030527-17	6M114766	03/19/13 11:03	01
FIELD BLANK 12MARCH2013	L13030527-28	6M114767	03/19/13 11:35	01
MW2-1	L13030527-18	6M114768	03/19/13 12:07	01
MW2-2	L13030527-19	6M114769	03/19/13 12:39	01
MW2-3	L13030527-22	6M114770	03/19/13 13:11	01
MW3-1	L13030527-23	6M114771	03/19/13 13:44	01
MW3-2	L13030527-24	6M114772	03/19/13 14:16	01
MW3-2 D	L13030527-25	6M114773	03/19/13 14:49	01
MW3-3	L13030527-27	6M114774	03/19/13 15:22	01
MW-58	L13030527-29	6M114775	03/19/13 15:54	01
35BWW04	L13030527-30	6M114776	03/19/13 16:27	01
35BWW06	L13030527-31	6M114777	03/19/13 17:00	01
35BWW05	L13030527-32	6M114778	03/19/13 17:32	01

Report Name: BLANK_SUMMARY
PDF File ID: 2799938
Report generated 03/25/2013 11:31

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG423795
Blank File ID: 8M386310
Blank Sample ID: WG423795-01
Prep Date: 03/17/13 16:14
Instrument ID: HPMS8
Analyzed Date: 03/17/13 16:14
Method: 8260B
Analyst: ADC

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423795-02	8M386311	03/17/13 16:44	01
LCS2	WG423795-03	8M386312	03/17/13 17:14	01
LCS	WG423795-04	8M386313	03/17/13 17:45	02
LCS2	WG423795-05	8M386314	03/17/13 18:15	02
TRIP BLANK 9MARCH2013	L13030527-08	8M386316	03/17/13 19:15	01
TRIP BLANK 10MARCH2013	L13030527-14	8M386317	03/17/13 19:45	01
TRIP BLANK 11MARCH2013	L13030527-16	8M386318	03/17/13 20:16	01
FIELD BLANK 9MARCH2013	L13030527-09	8M386323	03/17/13 22:46	01
35BWW09	L13030527-10	8M386324	03/17/13 23:16	01
35BWW08	L13030527-11	8M386325	03/17/13 23:46	01
35BWW08D	L13030527-12	8M386326	03/18/13 00:17	01
MW1-1	L13030527-13	8M386327	03/18/13 00:47	01
MW1-2	L13030527-15	8M386328	03/18/13 01:17	01

Report Name: BLANK_SUMMARY
PDF File ID: 2799938
Report generated 03/25/2013 11:31

Login Number:L13030527 Prep Date:03/17/13 15:42 Sample ID:WG423797-01
Instrument ID:HPMS11 Run Date:03/17/13 15:42 Prep Method:5030B/5030C/503
File ID:11M90303 Analyst:ADC Method:8260B
Workgroup (AAB#):WG423797 Matrix:Water Units:ug/L
Contract #: Cal ID:HPMS11-08-FEB-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
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METHOD BLANK REPORT

Login Number:L13030527 Prep Date:03/17/13 15:42 Sample ID:WG423797-01
Instrument ID:HPMS11 Run Date:03/17/13 15:42 Prep Method:5030B/5030C/503
File ID:11M90303 Analyst:ADC Method:8260B
Workgroup (AAB#):WG423797 Matrix:Water Units:ug/L
Contract #: Cal ID:HPMS11-08-FEB-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	96.2	86 - 118	PASS
1,2-Dichloroethane-d4	85.6	80 - 120	PASS
Toluene-d8	99.1	88 - 110	PASS
4-Bromofluorobenzene	97.9	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2799939
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/19/13 07:55 Sample ID: WG423959-01
Instrument ID: HPMS6 Run Date: 03/19/13 07:55 Prep Method: 5030B/5030C/503
File ID: 6M114760 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG423959 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-27-FEB-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 2799939
25-MAR-2013 11:31

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/19/13 07:55 Sample ID: WG423959-01
Instrument ID: HPMS6 Run Date: 03/19/13 07:55 Prep Method: 5030B/5030C/503
File ID: 6M114760 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG423959 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-27-FEB-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	98.5	86 - 118	PASS
1,2-Dichloroethane-d4	89.3	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	110	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2799939
25-MAR-2013 11:31

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13030527 Prep Date:03/17/13 16:14 Sample ID:WG423795-01
Instrument ID:HPMS8 Run Date:03/17/13 16:14 Prep Method:5030B/5030C/503
File ID:8M386310 Analyst:ADC Method:8260B
Workgroup (AAB#):WG423795 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-01-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 2799939
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13030527 Prep Date:03/17/13 16:14 Sample ID:WG423795-01
Instrument ID:HPMS8 Run Date:03/17/13 16:14 Prep Method:5030B/5030C/503
File ID:8M386310 Analyst:ADC Method:8260B
Workgroup (AAB#):WG423795 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-01-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	94.3	86 - 118	PASS
1,2-Dichloroethane-d4	113	80 - 120	PASS
Toluene-d8	109	88 - 110	PASS
4-Bromofluorobenzene	107	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2799939
25-MAR-2013 11:31

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/17/2013 Sample ID: WG423797-02
Instrument ID: HPMS11 Run Time: 16:13 Prep Method: 5030B/5030C/503
File ID: 11M90304 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG423797 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD56578 Cal ID: HPMS11-08-FEB-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	27.7	138	40 - 180	
Benzene	20.0	21.1	106	80 - 121	
Bromobenzene	20.0	19.7	98.5	80 - 120	
Bromochloromethane	20.0	20.2	101	65 - 130	
Bromodichloromethane	20.0	20.0	100	80 - 131	
Bromoform	20.0	20.6	103	70 - 130	
Bromomethane	20.0	18.1	90.5	30 - 145	
2-Butanone	20.0	21.7	109	10 - 170	
n-Butylbenzene	20.0	18.7	93.3	80 - 131	
sec-Butylbenzene	20.0	17.4	86.9	80 - 127	
tert-Butylbenzene	20.0	17.5	87.3	80 - 126	
Carbon disulfide	20.0	17.6	87.8	58 - 128	
Carbon tetrachloride	20.0	19.8	99.2	65 - 140	
Chlorobenzene	20.0	18.9	94.7	80 - 120	
Chlorodibromomethane	20.0	19.9	99.6	60 - 135	
Chloroethane	20.0	21.7	109	60 - 135	
2-Chloroethyl vinyl ether	20.0	19.6	97.9	45 - 160	
Chloroform	20.0	19.9	99.6	80 - 125	
Chloromethane	20.0	15.8	79.0	40 - 125	
2-Chlorotoluene	20.0	18.4	92.0	80 - 127	
4-Chlorotoluene	20.0	17.9	89.6	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	18.5	92.3	50 - 130	
1,2-Dibromoethane	20.0	20.4	102	80 - 129	
Dibromomethane	20.0	20.8	104	75 - 125	
1,2-Dichlorobenzene	20.0	18.2	90.9	80 - 125	
1,3-Dichlorobenzene	20.0	18.3	91.7	80 - 120	
1,4-Dichlorobenzene	20.0	19.2	95.9	80 - 120	
Dichlorodifluoromethane	20.0	22.1	110	40 - 160	
1,1-Dichloroethane	20.0	20.7	104	80 - 125	
1,2-Dichloroethane	20.0	19.3	96.5	80 - 129	
1,1-Dichloroethene	20.0	19.2	96.2	80 - 132	
cis-1,2-Dichloroethene	20.0	21.0	105	70 - 125	
trans-1,2-Dichloroethene	20.0	20.7	103	80 - 127	
1,2-Dichloropropane	20.0	22.6	113	80 - 120	
1,3-Dichloropropane	20.0	21.2	106	80 - 120	
2,2-Dichloropropane	20.0	19.1	95.3	80 - 133	
cis-1,3-Dichloropropene	20.0	22.3	112	70 - 130	
trans-1,3-Dichloropropene	20.0	20.1	100	80 - 130	
1,1-Dichloropropene	20.0	20.8	104	75 - 130	
Ethylbenzene	20.0	19.9	99.4	80 - 122	
2-Hexanone	20.0	20.9	104	55 - 130	

LCS - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/17/2013 Sample ID: WG423797-02
Instrument ID: HPMS11 Run Time: 16:13 Prep Method: 5030B/5030C/503
File ID: 11M90304 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG423797 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD56578 Cal ID: HPMS11-08-FEB-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	15.6	78.2	72 - 132	
Isopropylbenzene	20.0	18.6	92.8	80 - 122	
p-Isopropyltoluene	20.0	18.2	90.8	80 - 122	
4-Methyl-2-pentanone	20.0	20.1	100	64 - 140	
Methylene chloride	20.0	20.4	102	80 - 123	
Naphthalene	20.0	16.9	84.5	59 - 149	
n-Propylbenzene	20.0	18.6	92.8	80 - 129	
Styrene	20.0	20.7	104	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	20.6	103	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	20.3	102	79 - 125	
Tetrachloroethene	20.0	20.1	100	80 - 124	
Toluene	20.0	20.5	102	80 - 124	
1,2,3-Trichlorobenzene	20.0	18.5	92.5	55 - 140	
1,2,4-Trichlorobenzene	20.0	18.7	93.3	65 - 135	
1,1,1-Trichloroethane	20.0	19.6	98.0	80 - 134	
1,1,2-Trichloroethane	20.0	21.9	109	80 - 125	
Trichloroethene	20.0	21.1	105	80 - 122	
Trichlorofluoromethane	20.0	19.3	96.7	62 - 151	
1,2,3-Trichloropropane	20.0	20.5	102	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.3	102	80 - 125	
1,3,5-Trimethylbenzene	20.0	20.3	102	80 - 127	
Vinyl acetate	20.0	29.9	149	10 - 190	
Vinyl chloride	20.0	15.3	76.5	50 - 170	
o-Xylene	20.0	18.6	93.0	80 - 122	
m-,p-Xylene	40.0	38.8	97.1	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	97.7	86 - 118	PASS
1,2-Dichloroethane-d4	84.8	80 - 120	PASS
Toluene-d8	100	88 - 110	PASS
4-Bromofluorobenzene	96.3	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 2799106
Report generated: 03/22/2013 16:44

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/19/2013 Sample ID: WG423959-02
Instrument ID: HPMS6 Run Time: 08:26 Prep Method: 5030B/5030C/503
File ID: 6M114761 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG423959 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD56826 Cal ID: HPMS6-27-FEB-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	17.2	86.2	40 - 180	
Benzene	20.0	20.7	104	80 - 121	
Bromobenzene	20.0	20.5	103	80 - 120	
Bromochloromethane	20.0	20.1	100	65 - 130	
Bromodichloromethane	20.0	19.4	97.2	80 - 131	
Bromoform	20.0	16.3	81.3	70 - 130	
Bromomethane	20.0	18.7	93.5	30 - 145	
2-Butanone	20.0	21.6	108	10 - 170	
n-Butylbenzene	20.0	21.2	106	80 - 131	
sec-Butylbenzene	20.0	18.8	94.2	80 - 127	
tert-Butylbenzene	20.0	18.6	92.8	80 - 126	
Carbon disulfide	20.0	18.6	92.8	58 - 128	
Carbon tetrachloride	20.0	19.7	98.5	65 - 140	
Chlorobenzene	20.0	17.9	89.6	80 - 120	
Chlorodibromomethane	20.0	17.0	84.9	60 - 135	
Chloroethane	20.0	24.7	124	60 - 135	
2-Chloroethyl vinyl ether	20.0	17.0	85.2	45 - 160	
Chloroform	20.0	19.6	98.2	80 - 125	
Chloromethane	20.0	18.6	93.2	40 - 125	
2-Chlorotoluene	20.0	18.7	93.6	80 - 127	
4-Chlorotoluene	20.0	18.5	92.6	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	17.3	86.6	50 - 130	
1,2-Dibromoethane	20.0	19.6	97.8	80 - 129	
Dibromomethane	20.0	18.4	92.1	75 - 125	
1,2-Dichlorobenzene	20.0	18.3	91.4	80 - 125	
1,3-Dichlorobenzene	20.0	18.0	90.0	80 - 120	
1,4-Dichlorobenzene	20.0	19.0	95.1	80 - 120	
Dichlorodifluoromethane	20.0	33.4	167	40 - 160	*
1,1-Dichloroethane	20.0	21.0	105	80 - 125	
1,2-Dichloroethane	20.0	18.7	93.6	80 - 129	
1,1-Dichloroethene	20.0	20.6	103	80 - 132	
cis-1,2-Dichloroethene	20.0	20.6	103	70 - 125	
trans-1,2-Dichloroethene	20.0	21.4	107	80 - 127	
1,2-Dichloropropane	20.0	22.7	113	80 - 120	
1,3-Dichloropropane	20.0	20.7	104	80 - 120	
2,2-Dichloropropane	20.0	19.2	96.2	80 - 133	
cis-1,3-Dichloropropene	20.0	19.5	97.6	70 - 130	
trans-1,3-Dichloropropene	20.0	16.4	82.0	80 - 130	
1,1-Dichloropropene	20.0	20.5	103	75 - 130	
Ethylbenzene	20.0	18.8	93.9	80 - 122	
2-Hexanone	20.0	18.7	93.5	55 - 130	

LCS - Modified 03/06/2008
PDF File ID: 2799106
Report generated: 03/22/2013 16:44

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/19/2013 Sample ID: WG423959-02
Instrument ID: HPMS6 Run Time: 08:26 Prep Method: 5030B/5030C/503
File ID: 6M114761 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG423959 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD56826 Cal ID: HPMS6-27-FEB-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	19.7	98.6	72 - 132	
Isopropylbenzene	20.0	18.1	90.3	80 - 122	
p-Isopropyltoluene	20.0	19.0	95.0	80 - 122	
4-Methyl-2-pentanone	20.0	19.2	96.2	64 - 140	
Methylene chloride	20.0	19.7	98.7	80 - 123	
Naphthalene	20.0	20.1	101	59 - 149	
n-Propylbenzene	20.0	19.2	95.9	80 - 129	
Styrene	20.0	17.3	86.3	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	16.6	82.9	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	21.8	109	79 - 125	
Tetrachloroethene	20.0	18.7	93.6	80 - 124	
Toluene	20.0	19.9	99.5	80 - 124	
1,2,3-Trichlorobenzene	20.0	19.6	98.1	55 - 140	
1,2,4-Trichlorobenzene	20.0	19.8	99.2	65 - 135	
1,1,1-Trichloroethane	20.0	19.4	96.8	80 - 134	
1,1,2-Trichloroethane	20.0	20.1	100	80 - 125	
Trichloroethene	20.0	21.8	109	80 - 122	
Trichlorofluoromethane	20.0	21.3	106	62 - 151	
1,2,3-Trichloropropane	20.0	19.2	96.2	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.1	101	80 - 125	
1,3,5-Trimethylbenzene	20.0	20.8	104	80 - 127	
Vinyl acetate	20.0	25.3	126	10 - 190	
Vinyl chloride	20.0	17.7	88.6	50 - 170	
o-Xylene	20.0	17.6	87.8	80 - 122	
m-,p-Xylene	40.0	36.4	90.9	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	97.6	86 - 118	PASS
1,2-Dichloroethane-d4	90.3	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	110	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 2799106
Report generated: 03/22/2013 16:44

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/17/2013 Sample ID: WG423795-02
Instrument ID: HPMS8 Run Time: 16:44 Prep Method: 5030B/5030C/503
File ID: 8M386311 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG423795 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD56752 Cal ID: HPMS8-01-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	18.5	92.4	40 - 180	
Benzene	20.0	20.1	100	80 - 121	
Bromobenzene	20.0	20.2	101	80 - 120	
Bromochloromethane	20.0	20.1	100	65 - 130	
Bromodichloromethane	20.0	21.6	108	80 - 131	
Bromoform	20.0	21.9	109	70 - 130	
Bromomethane	20.0	16.9	84.4	30 - 145	
2-Butanone	20.0	20.6	103	10 - 170	
n-Butylbenzene	20.0	23.7	118	80 - 131	
sec-Butylbenzene	20.0	19.7	98.6	80 - 127	
tert-Butylbenzene	20.0	19.7	98.3	80 - 126	
Carbon disulfide	20.0	20.1	100	58 - 128	
Carbon tetrachloride	20.0	22.8	114	65 - 140	
Chlorobenzene	20.0	19.6	98.1	80 - 120	
Chlorodibromomethane	20.0	22.3	112	60 - 135	
Chloroethane	20.0	21.0	105	60 - 135	
2-Chloroethyl vinyl ether	20.0	19.1	95.5	45 - 160	
Chloroform	20.0	22.4	112	80 - 125	
Chloromethane	20.0	19.9	99.7	40 - 125	
2-Chlorotoluene	20.0	20.2	101	80 - 127	
4-Chlorotoluene	20.0	20.9	104	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	23.4	117	50 - 130	
1,2-Dibromoethane	20.0	21.5	108	80 - 129	
Dibromomethane	20.0	22.2	111	75 - 125	
1,2-Dichlorobenzene	20.0	18.8	93.9	80 - 125	
1,3-Dichlorobenzene	20.0	18.1	90.6	80 - 120	
1,4-Dichlorobenzene	20.0	19.8	98.9	80 - 120	
Dichlorodifluoromethane	20.0	37.0	185	40 - 160	*
1,1-Dichloroethane	20.0	21.0	105	80 - 125	
1,2-Dichloroethane	20.0	24.5	122	80 - 129	
1,1-Dichloroethene	20.0	21.0	105	80 - 132	
cis-1,2-Dichloroethene	20.0	21.1	106	70 - 125	
trans-1,2-Dichloroethene	20.0	21.6	108	80 - 127	
1,2-Dichloropropane	20.0	20.0	100	80 - 120	
1,3-Dichloropropane	20.0	23.4	117	80 - 120	
2,2-Dichloropropane	20.0	23.1	115	80 - 133	
cis-1,3-Dichloropropene	20.0	22.1	111	70 - 130	
trans-1,3-Dichloropropene	20.0	24.4	122	80 - 130	
1,1-Dichloropropene	20.0	21.9	109	75 - 130	
Ethylbenzene	20.0	21.1	105	80 - 122	
2-Hexanone	20.0	21.7	109	55 - 130	

LCS - Modified 03/06/2008
PDF File ID: 2799106
Report generated: 03/22/2013 16:44

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/17/2013 Sample ID: WG423795-02
Instrument ID: HPMS8 Run Time: 16:44 Prep Method: 5030B/5030C/503
File ID: 8M386311 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG423795 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD56752 Cal ID: HPMS8-01-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	19.9	99.6	72 - 132	
Isopropylbenzene	20.0	20.1	100	80 - 122	
p-Isopropyltoluene	20.0	19.9	99.3	80 - 122	
4-Methyl-2-pentanone	20.0	18.6	92.8	64 - 140	
Methylene chloride	20.0	19.6	98.1	80 - 123	
Naphthalene	20.0	20.0	99.9	59 - 149	
n-Propylbenzene	20.0	20.8	104	80 - 129	
Styrene	20.0	20.9	104	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	24.8	124	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	23.2	116	79 - 125	
Tetrachloroethene	20.0	20.6	103	80 - 124	
Toluene	20.0	21.9	109	80 - 124	
1,2,3-Trichlorobenzene	20.0	19.5	97.5	55 - 140	
1,2,4-Trichlorobenzene	20.0	19.7	98.7	65 - 135	
1,1,1-Trichloroethane	20.0	24.3	122	80 - 134	
1,1,2-Trichloroethane	20.0	25.0	125	80 - 125	
Trichloroethene	20.0	20.8	104	80 - 122	
Trichlorofluoromethane	20.0	25.5	128	62 - 151	
1,2,3-Trichloropropane	20.0	22.2	111	75 - 125	
1,2,4-Trimethylbenzene	20.0	21.4	107	80 - 125	
1,3,5-Trimethylbenzene	20.0	21.6	108	80 - 127	
Vinyl chloride	20.0	20.7	103	50 - 170	
o-Xylene	20.0	19.7	98.5	80 - 122	
m-,p-Xylene	40.0	40.8	102	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	95.3	86 - 118	PASS
1,2-Dichloroethane-d4	112	80 - 120	PASS
Toluene-d8	107	88 - 110	PASS
4-Bromofluorobenzene	108	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 2799106
Report generated: 03/22/2013 16:44

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Analyst: ADC Prep Method: 5030B/5030C/503
Instrument ID: HPMS8 Matrix: Water Method: 8260B
Workgroup (AAB#): WG423795 Units: ug/L
QC Key: STD Lot #: STD56752

Sample ID: WG423795-02 LCS File ID: 8M386311 Run Date: 03/17/2013 16:44
Sample ID: WG423795-03 LCS2 File ID: 8M386312 Run Date: 03/17/2013 17:14

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	24.8	124	20.0	24.3	122	2.08	80 - 130	20	
1,1,1-Trichloroethane	20.0	24.3	122	20.0	24.7	124	1.58	80 - 134	20	
1,1,2,2-Tetrachloroethane	20.0	23.2	116	20.0	22.7	114	2.15	79 - 125	20	
1,1,2-Trichloroethane	20.0	25.0	125	20.0	24.4	122	2.66	80 - 125	20	
1,1-Dichloroethane	20.0	21.0	105	20.0	21.2	106	0.794	80 - 125	20	
1,1-Dichloroethene	20.0	21.0	105	20.0	21.1	106	0.666	80 - 132	20	
1,1-Dichloropropene	20.0	21.9	109	20.0	22.7	113	3.47	75 - 130	20	
1,2,3-Trichlorobenzene	20.0	19.5	97.5	20.0	19.5	97.7	0.205	55 - 140	20	
1,2,3-Trichloropropane	20.0	22.2	111	20.0	22.4	112	0.911	75 - 125	20	
1,2,4-Trichlorobenzene	20.0	19.7	98.7	20.0	20.1	101	1.95	65 - 135	20	
1,2,4-Trimethylbenzene	20.0	21.4	107	20.0	22.1	111	3.33	80 - 125	20	
1,2-Dibromo-3-chloropropane	20.0	23.4	117	20.0	23.7	119	1.21	50 - 130	20	
1,2-Dibromoethane	20.0	21.5	108	20.0	21.6	108	0.193	80 - 129	20	
1,2-Dichlorobenzene	20.0	18.8	93.9	20.0	18.9	94.5	0.716	80 - 125	20	
1,2-Dichloroethane	20.0	24.5	122	20.0	24.1	120	1.63	80 - 129	20	
1,2-Dichloropropane	20.0	20.0	100	20.0	19.7	98.5	1.59	80 - 120	20	
1,3,5-Trimethylbenzene	20.0	21.6	108	20.0	22.3	112	3.17	80 - 127	20	
1,3-Dichlorobenzene	20.0	18.1	90.6	20.0	18.8	93.9	3.60	80 - 120	20	
1,3-Dichloropropane	20.0	23.4	117	20.0	23.7	119	1.12	80 - 120	20	
1,4-Dichlorobenzene	20.0	19.8	98.9	20.0	20.1	100	1.51	80 - 120	20	
2,2-Dichloropropane	20.0	23.1	115	20.0	23.4	117	1.36	80 - 133	20	
2-Butanone	20.0	20.6	103	20.0	20.5	102	0.644	10 - 170	20	
2-Chloroethyl vinyl ether	20.0	19.1	95.5	20.0	19.6	98.1	2.69	45 - 160	20	
2-Chlorotoluene	20.0	20.2	101	20.0	23.4	117	14.5	80 - 127	20	
2-Hexanone	20.0	21.7	109	20.0	21.2	106	2.70	55 - 130	20	
4-Chlorotoluene	20.0	20.9	104	20.0	21.0	105	0.574	80 - 126	20	
4-Methyl-2-pentanone	20.0	18.6	92.8	20.0	19.4	97.1	4.58	64 - 140	20	
Acetone	20.0	18.5	92.4	20.0	18.2	90.9	1.66	40 - 180	20	
Benzene	20.0	20.1	100	20.0	20.9	105	4.20	80 - 121	20	
Bromobenzene	20.0	20.2	101	20.0	20.1	100	0.594	80 - 120	20	
Bromochloromethane	20.0	20.1	100	20.0	19.7	98.3	1.99	65 - 130	20	
Bromodichloromethane	20.0	21.6	108	20.0	22.0	110	1.99	80 - 131	20	
Bromoform	20.0	21.9	109	20.0	21.3	106	2.79	70 - 130	20	
Bromomethane	20.0	16.9	84.4	20.0	17.9	89.3	5.65	30 - 145	20	
Carbon disulfide	20.0	20.1	100	20.0	21.0	105	4.64	58 - 128	20	
Carbon tetrachloride	20.0	22.8	114	20.0	23.5	118	3.19	65 - 140	20	
Chlorobenzene	20.0	19.6	98.1	20.0	19.7	98.7	0.616	80 - 120	20	
Chloroethane	20.0	21.0	105	20.0	20.6	103	2.02	60 - 135	20	
Chloroform	20.0	22.4	112	20.0	22.6	113	0.701	80 - 125	20	
Chloromethane	20.0	19.9	99.7	20.0	20.7	103	3.56	40 - 125	20	

LCS_LCS2 - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Analyst: ADC Prep Method: 5030B/5030C/503
Instrument ID: HPMS8 Matrix: Water Method: 8260B
Workgroup (AAB#): WG423795 Units: ug/L
QC Key: STD Lot #: STD56752

Sample ID: WG423795-02 LCS File ID: 8M386311 Run Date: 03/17/2013 16:44
Sample ID: WG423795-03 LCS2 File ID: 8M386312 Run Date: 03/17/2013 17:14

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,2-Dichloroethene	20.0	21.1	106	20.0	21.8	109	3.23	70 - 125	20	
cis-1,3-Dichloropropene	20.0	22.1	111	20.0	22.7	114	2.59	70 - 130	20	
Chlorodibromomethane	20.0	22.3	112	20.0	22.1	110	1.07	60 - 135	20	
Dibromomethane	20.0	22.2	111	20.0	22.0	110	0.801	75 - 125	20	
Dichlorodifluoromethane	20.0	37.0	185	20.0	36.4	182	1.54	40 - 160	20	*
Ethylbenzene	20.0	21.1	105	20.0	21.8	109	3.47	80 - 122	20	
Hexachlorobutadiene	20.0	19.9	99.6	20.0	20.8	104	4.26	72 - 132	20	
Isopropylbenzene	20.0	20.1	100	20.0	20.7	103	2.97	80 - 122	20	
m-,p-Xylene	40.0	40.8	102	40.0	41.4	104	1.63	80 - 122	20	
Methylene chloride	20.0	19.6	98.1	20.0	20.1	101	2.52	80 - 123	20	
n-Butylbenzene	20.0	23.7	118	20.0	24.3	121	2.44	80 - 131	20	
n-Propylbenzene	20.0	20.8	104	20.0	21.3	107	2.45	80 - 129	20	
Naphthalene	20.0	20.0	99.9	20.0	20.1	100	0.540	59 - 149	20	
o-Xylene	20.0	19.7	98.5	20.0	19.5	97.7	0.763	80 - 122	20	
p-Isopropyltoluene	20.0	19.9	99.3	20.0	20.2	101	1.86	80 - 122	20	
sec-Butylbenzene	20.0	19.7	98.6	20.0	20.1	101	2.16	80 - 127	20	
Styrene	20.0	20.9	104	20.0	21.3	106	1.98	80 - 123	20	
tert-Butylbenzene	20.0	19.7	98.3	20.0	20.3	102	3.41	80 - 126	20	
Tetrachloroethene	20.0	20.6	103	20.0	21.4	107	3.64	80 - 124	20	
Toluene	20.0	21.9	109	20.0	22.4	112	2.52	80 - 124	20	
trans-1,2-Dichloroethene	20.0	21.6	108	20.0	22.2	111	2.84	80 - 127	20	
trans-1,3-Dichloropropene	20.0	24.4	122	20.0	25.0	125	2.48	80 - 130	20	
Trichloroethene	20.0	20.8	104	20.0	20.9	105	0.443	80 - 122	20	
Trichlorofluoromethane	20.0	25.5	128	20.0	26.2	131	2.48	62 - 151	20	
Vinyl chloride	20.0	20.7	103	20.0	20.8	104	0.626	50 - 170	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	112	111	80 - 120	PASS
Dibromofluoromethane	95.3	93.9	86 - 118	PASS
4-Bromofluorobenzene	108	107	86 - 115	PASS
Toluene-d8	107	108	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
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Report generated: 03/25/2013 11:31

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13030527 Cal ID: HPMS11- 08-FEB-13 Worknum: WG423797

Instrument ID: HPMS11 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13030527-03 File ID: 11M90320 Dil: 1 Method: 5035A

Sample ID: L13030527-05 MS File ID: 11M90305 Dil: 1 Matrix: 8260B

Sample ID: L13030527-06 MSD File ID: 11M90306 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	21.1	105	20.0	21.2	106	0.719	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	19.5	97.3	20.0	19.3	96.5	0.797	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	21.3	107	20.0	21.6	108	1.18	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	22.3	111	20.0	22.8	114	2.31	80 - 125	20	
1,1-Dichloroethane	0.320	20.0	21.0	104	20.0	21.3	105	1.46	80 - 125	20	
1,1-Dichloroethene	1.79	20.0	19.9	90.4	20.0	19.5	88.6	1.84	80 - 132	20	
1,1-Dichloropropene	ND	20.0	20.4	102	20.0	19.8	98.8	2.92	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	19.4	97	20.0	19.5	97.3	0.229	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	20.7	103	20.0	20.8	104	0.459	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	19.2	95.9	20.0	19.5	97.5	1.65	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	20.0	100	20.0	20.2	101	0.824	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	19.3	96.6	20.0	19.5	97.7	1.11	50 - 130	20	
1,2-Dibromoethane	ND	20.0	21.8	109	20.0	21.7	109	0.361	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	18.4	92	20.0	18.8	93.8	1.89	80 - 125	20	
1,2-Dichloroethane	ND	20.0	20.2	101	20.0	19.8	99.1	2.02	80 - 129	20	
1,2-Dichloropropane	ND	20.0	22.9	114	20.0	23.1	116	1.17	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	20.4	102	20.0	20.3	102	0.124	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	18.2	90.8	20.0	18.7	93.4	2.85	80 - 120	20	
1,3-Dichloropropane	ND	20.0	21.8	109	20.0	21.8	109	0.106	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	19.5	97.6	20.0	19.6	98.1	0.422	80 - 120	20	
2,2-Dichloropropane	ND	20.0	19.0	94.9	20.0	18.6	93	2.02	80 - 133	20	
2-Butanone	ND	20.0	22.7	114	20.0	21.9	109	3.81	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	18.3	91.7	20.0	18.5	92.6	0.970	80 - 127	20	
2-Hexanone	ND	20.0	21.9	110	20.0	22.0	110	0.567	55 - 130	20	
4-Chlorotoluene	ND	20.0	17.9	89.6	20.0	18.1	90.7	1.12	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	22.1	110	20.0	21.5	107	2.85	64 - 140	20	
Acetone	ND	20.0	24.5	123	20.0	19.7	98.5	21.9	40 - 180	20	#
Benzene	ND	20.0	21.2	106	20.0	21.1	106	0.101	80 - 121	20	
Bromobenzene	ND	20.0	19.7	98.3	20.0	19.8	99.1	0.738	80 - 120	20	
Bromochloromethane	ND	20.0	20.6	103	20.0	20.9	104	1.52	65 - 130	20	
Bromodichloromethane	ND	20.0	20.6	103	20.0	20.7	103	0.365	80 - 131	20	
Bromoform	ND	20.0	21.8	109	20.0	21.5	108	1.50	70 - 130	20	
Bromomethane	ND	20.0	17.5	87.4	20.0	17.7	88.4	1.15	30 - 145	20	
Carbon disulfide	ND	20.0	17.8	89.1	20.0	17.6	88	1.33	58 - 128	20	
Carbon tetrachloride	ND	20.0	19.4	97.1	20.0	19.0	95.2	1.99	65 - 140	20	
Chlorobenzene	ND	20.0	19.2	95.8	20.0	19.3	96.3	0.529	80 - 120	20	
Chloroethane	ND	20.0	21.3	107	20.0	21.3	106	0.209	60 - 135	20	
Chloroform	ND	20.0	20.2	101	20.0	20.3	102	0.691	80 - 125	20	
Chloromethane	ND	20.0	15.2	76.2	20.0	15.5	77.5	1.71	40 - 125	20	
cis-1,2-Dichloroethene	0.465	20.0	21.5	105	20.0	22.1	108	2.70	70 - 125	20	

MS_MSD - Modified 03/06/2008

PDF File ID: 2799107

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13030527 Cal ID: HPMS11 08-FEB-13 Worknum: WG423797

Instrument ID: HPMS11 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13030527-03 File ID: 11M90320 Dil: 1 Method: 5035A

Sample ID: L13030527-05 MS File ID: 11M90305 Dil: 1 Matrix: 8260B

Sample ID: L13030527-06 MSD File ID: 11M90306 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	22.8	114	20.0	22.8	114	0.0337	70 - 130	20	
Chlorodibromomethane	ND	20.0	20.6	103	20.0	21.1	105	2.11	60 - 135	20	
Dibromomethane	ND	20.0	21.7	108	20.0	21.7	109	0.217	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	20.1	100	20.0	19.3	96.3	4.25	50 - 160	20	
Ethylbenzene	ND	20.0	19.9	99.4	20.0	19.7	98.7	0.639	80 - 122	20	
Hexachlorobutadiene	ND	20.0	15.1	75.7	20.0	15.4	77.1	1.92	72 - 132	20	
Isopropylbenzene	ND	20.0	18.3	91.7	20.0	18.3	91.5	0.247	80 - 122	20	
m-,p-Xylene	ND	40.0	39.2	98	40.0	39.4	98.6	0.629	80 - 122	20	
Methylene chloride	ND	20.0	20.7	103	20.0	20.8	104	0.311	80 - 123	20	
n-Butylbenzene	ND	20.0	18.4	91.8	20.0	18.3	91.3	0.587	80 - 131	20	
n-Propylbenzene	ND	20.0	18.4	92.1	20.0	18.5	92.5	0.427	80 - 129	20	
Naphthalene	ND	20.0	18.4	92.2	20.0	18.7	93.5	1.44	59 - 149	20	
o-Xylene	ND	20.0	18.7	93.4	20.0	18.9	94.3	0.950	80 - 122	20	
p-Isopropyltoluene	ND	20.0	18.0	90.2	20.0	18.0	90.2	0.0018	80 - 122	20	
sec-Butylbenzene	ND	20.0	17.0	85.1	20.0	17.1	85.6	0.577	80 - 127	20	
Styrene	ND	20.0	20.9	104	20.0	20.9	104	0.0889	80 - 123	20	
tert-Butylbenzene	ND	20.0	17.3	86.3	20.0	17.4	87.1	1.00	80 - 126	20	
Tetrachloroethene	7.06	20.0	26.0	94.5	20.0	25.8	93.8	0.527	80 - 124	20	
Toluene	ND	20.0	20.7	104	20.0	20.7	103	0.208	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	21.0	105	20.0	20.9	104	0.771	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	21.0	105	20.0	20.7	103	1.40	80 - 130	20	
Trichloroethene	3.77	20.0	24.2	102	20.0	24.3	103	0.488	80 - 122	20	
Trichlorofluoromethane	ND	20.0	18.4	91.9	20.0	17.9	89.5	2.65	62 - 151	20	
Vinyl acetate	ND	20.0	29.9	150	20.0	28.7	144	4.09	10 - 190	20	
Vinyl chloride	0.254	20.0	15.1	74.4	20.0	15.3	75.1	0.974	50 - 170	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2799107

Report generated 03/25/2013 11:31

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13030527 Cal ID: HPMS6- 27-FEB-13 Worknum: WG423959

Instrument ID: HPMS6 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13030527-19 File ID: 6M114769 Dil: 1 Method: 5035A

Sample ID: L13030527-20 MS File ID: 6M114762 Dil: 1 Matrix: 8260B

Sample ID: L13030527-21 MSD File ID: 6M114763 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	16.3	81.6	20.0	16.9	84.5	3.41	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	19.5	97.6	20.0	19.8	99	1.42	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	22.0	110	20.0	22.7	113	2.97	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	20.0	100	20.0	20.2	101	1.14	80 - 125	20	
1,1-Dichloroethane	ND	20.0	21.1	106	20.0	21.5	108	1.84	80 - 125	20	
1,1-Dichloroethene	ND	20.0	20.6	103	20.0	20.6	103	0.0060	80 - 132	20	
1,1-Dichloropropene	ND	20.0	20.7	103	20.0	20.8	104	0.673	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	20.0	100	20.0	20.3	101	1.23	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	20.2	101	20.0	19.9	99.5	1.32	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	20.3	101	20.0	20.5	103	1.31	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	20.0	99.9	20.0	20.4	102	2.21	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	17.8	89.1	20.0	18.2	91	2.05	50 - 130	20	
1,2-Dibromoethane	ND	20.0	19.7	98.7	20.0	20.0	100	1.43	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	18.3	91.6	20.0	18.8	93.8	2.38	80 - 125	20	
1,2-Dichloroethane	ND	20.0	18.7	93.3	20.0	19.1	95.3	2.14	80 - 129	20	
1,2-Dichloropropane	ND	20.0	22.7	114	20.0	23.4	117	2.79	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	20.5	103	20.0	20.9	104	1.62	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	18.0	90.1	20.0	18.3	91.3	1.32	80 - 120	20	
1,3-Dichloropropane	ND	20.0	20.5	103	20.0	20.9	105	1.92	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	19.1	95.7	20.0	19.5	97.6	1.98	80 - 120	20	
2,2-Dichloropropane	ND	20.0	19.6	98	20.0	20.0	99.8	1.78	80 - 133	20	
2-Butanone	ND	20.0	20.1	100	20.0	20.4	102	1.58	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	19.0	95	20.0	18.9	94.3	0.719	80 - 127	20	
2-Hexanone	ND	20.0	17.6	87.9	20.0	17.8	88.9	1.17	55 - 130	20	
4-Chlorotoluene	ND	20.0	17.9	89.4	20.0	18.7	93.4	4.31	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	19.3	96.6	20.0	19.9	99.5	2.95	64 - 140	20	
Acetone	ND	20.0	16.4	82.2	20.0	15.2	76.2	7.63	40 - 180	20	
Benzene	ND	20.0	20.5	103	20.0	21.1	105	2.55	80 - 121	20	
Bromobenzene	ND	20.0	20.6	103	20.0	20.8	104	0.978	80 - 120	20	
Bromochloromethane	ND	20.0	20.3	102	20.0	20.8	104	2.36	65 - 130	20	
Bromodichloromethane	ND	20.0	19.7	98.3	20.0	20.3	101	3.06	80 - 131	20	
Bromoform	ND	20.0	16.3	81.7	20.0	16.8	83.9	2.63	70 - 130	20	
Bromomethane	ND	20.0	19.1	95.4	20.0	20.1	100	4.98	30 - 145	20	
Carbon disulfide	ND	20.0	18.7	93.7	20.0	18.5	92.7	1.08	58 - 128	20	
Carbon tetrachloride	ND	20.0	20.0	100	20.0	20.0	99.8	0.460	65 - 140	20	
Chlorobenzene	ND	20.0	17.7	88.4	20.0	18.1	90.3	2.12	80 - 120	20	
Chloroethane	ND	20.0	24.7	123	20.0	25.1	126	1.81	60 - 135	20	
Chloroform	ND	20.0	19.6	98.1	20.0	20.2	101	2.73	80 - 125	20	
Chloromethane	ND	20.0	18.8	94.1	20.0	19.2	96.1	2.12	40 - 125	20	
cis-1,2-Dichloroethene	ND	20.0	20.6	103	20.0	21.3	106	3.14	70 - 125	20	

MS_MSD - Modified 03/06/2008

PDF File ID: 2799107

Report generated 03/25/2013 11:31

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13030527 Cal ID: HPMS6 27-FEB-13 Worknum: WG423959

Instrument ID: HPMS6 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13030527-19 File ID: 6M114769 Dil: 1 Method: 5035A

Sample ID: L13030527-20 MS File ID: 6M114762 Dil: 1 Matrix: 8260B

Sample ID: L13030527-21 MSD File ID: 6M114763 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	19.7	98.5	20.0	20.4	102	3.45	70 - 130	20	
Chlorodibromomethane	ND	20.0	16.9	84.5	20.0	17.1	85.4	1.10	60 - 135	20	
Dibromomethane	ND	20.0	18.7	93.7	20.0	19.3	96.4	2.82	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	34.4	172	20.0	33.0	165	4.34	50 - 160	20	*
Ethylbenzene	ND	20.0	18.6	92.9	20.0	18.9	94.7	1.98	80 - 122	20	
Hexachlorobutadiene	ND	20.0	19.8	99.2	20.0	20.3	102	2.57	72 - 132	20	
Isopropylbenzene	ND	20.0	18.0	89.8	20.0	18.2	90.8	1.07	80 - 122	20	
m-,p-Xylene	ND	40.0	36.4	90.9	40.0	36.8	92.1	1.29	80 - 122	20	
Methylene chloride	ND	20.0	20.0	99.9	20.0	20.4	102	2.12	80 - 123	20	
n-Butylbenzene	ND	20.0	21.3	106	20.0	21.6	108	1.53	80 - 131	20	
n-Propylbenzene	ND	20.0	19.1	95.7	20.0	19.4	97.2	1.60	80 - 129	20	
Naphthalene	ND	20.0	20.7	103	20.0	20.6	103	0.394	59 - 149	20	
o-Xylene	ND	20.0	17.5	87.5	20.0	17.7	88.5	1.11	80 - 122	20	
p-Isopropyltoluene	ND	20.0	19.0	94.8	20.0	19.3	96.3	1.56	80 - 122	20	
sec-Butylbenzene	ND	20.0	18.7	93.4	20.0	18.9	94.5	1.11	80 - 127	20	
Styrene	ND	20.0	17.1	85.3	20.0	17.4	87.1	2.12	80 - 123	20	
tert-Butylbenzene	ND	20.0	18.4	92.1	20.0	18.4	92.1	0.0126	80 - 126	20	
Tetrachloroethene	ND	20.0	18.5	92.4	20.0	18.6	93	0.637	80 - 124	20	
Toluene	ND	20.0	19.7	98.5	20.0	20.0	100	1.61	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	21.4	107	20.0	21.7	109	1.59	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	16.5	82.6	20.0	16.6	82.9	0.415	80 - 130	20	
Trichloroethene	0.312	20.0	21.9	108	20.0	22.4	110	2.24	80 - 122	20	
Trichlorofluoromethane	ND	20.0	21.8	109	20.0	21.2	106	2.56	62 - 151	20	
Vinyl acetate	ND	20.0	24.4	122	20.0	24.9	125	2.04	10 - 190	20	
Vinyl chloride	ND	20.0	18.1	90.4	20.0	18.2	91.2	0.855	50 - 170	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2799107

Report generated 03/25/2013 11:31

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG423950
Blank File ID: P2.031813.180038
Blank Sample ID: WG423919-02
Prep Date: 03/18/13 13:59
Instrument ID: PE-ICP2
Analyzed Date: 03/18/13 18:00
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423919-03	P2.031813.180338	03/18/13 18:03	01
MW2-2	L13030527-19	P2.031813.183356	03/18/13 18:33	01
MW2-2 MS	L13030527-20	P2.031813.183558	03/18/13 18:35	01
MW2-2 MSD	L13030527-21	P2.031813.183801	03/18/13 18:38	01
35BWW09	L13030527-10	P2.031913.132103	03/19/13 13:21	01
35BWW08	L13030527-11	P2.031913.132407	03/19/13 13:24	01
35BWW08D	L13030527-12	P2.031913.132710	03/19/13 13:27	01
MW1-1	L13030527-13	P2.031913.133014	03/19/13 13:30	01
MW1-2	L13030527-15	P2.031913.133317	03/19/13 13:33	01
FIELD BLANK 11MARCH2013	L13030527-17	P2.031913.133620	03/19/13 13:36	01
MW2-1	L13030527-18	P2.031913.133919	03/19/13 13:39	01
MW2-3	L13030527-22	P2.031913.134219	03/19/13 13:42	01
MW3-1	L13030527-23	P2.031913.134519	03/19/13 13:45	01
MW3-2	L13030527-24	P2.031913.135347	03/19/13 13:53	01
MW3-2 D	L13030527-25	P2.031913.135646	03/19/13 13:56	01
MW3-3	L13030527-27	P2.031913.135949	03/19/13 13:59	01
FIELD BLANK 12MARCH2013	L13030527-28	P2.031913.140248	03/19/13 14:02	01
35BWW09	L13030527-10	P2.032013.124444	03/20/13 12:44	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2791866
Report generated 03/21/2013 07:30

METHOD BLANK SUMMARY

Login Number: L13030527
Blank File ID: T2.032013.151605
Prep Date: 03/18/13 09:24
Analyzed Date: 03/20/13 15:16
Analyst: KHR

Work Group: WG424195
Blank Sample ID: WG423854-02
Instrument ID: ICP-THERMO2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423854-03	T2.032013.151932	03/20/13 15:19	01
35BWW14	L13030527-01	T2.032013.162405	03/20/13 16:24	01
MW 4-1	L13030527-02	T2.032013.162727	03/20/13 16:27	01
MW 4-2	L13030527-03	T2.032013.163739	03/20/13 16:37	01
MW 4-2 D	L13030527-04	T2.032013.164102	03/20/13 16:41	01
MW 4-2 MS	L13030527-05	T2.032013.164425	03/20/13 16:44	01
MW 4-2 MSD	L13030527-06	T2.032013.164737	03/20/13 16:47	01
MW 4-3	L13030527-07	T2.032013.165049	03/20/13 16:50	01
FIELD BLANK 9MARCH2013	L13030527-09	T2.032013.165410	03/20/13 16:54	01
LCS	WG423854-03	T2.032113.095845	03/21/13 09:58	02
35BWW14	L13030527-01	T2.032113.100201	03/21/13 10:02	02
MW 4-1	L13030527-02	T2.032113.100523	03/21/13 10:05	02
MW 4-2	L13030527-03	T2.032113.100848	03/21/13 10:08	02
MW 4-2 MS	L13030527-05	T2.032113.101211	03/21/13 10:12	02
MW 4-2 MSD	L13030527-06	T2.032113.101524	03/21/13 10:15	02
MW 4-2 D	L13030527-04	T2.032113.103240	03/21/13 10:32	02
MW 4-3	L13030527-07	T2.032113.103602	03/21/13 10:36	02
FIELD BLANK 9MARCH2013	L13030527-09	T2.032113.103923	03/21/13 10:39	02

Report Name: BLANK_SUMMARY
PDF File ID: 2795827
Report generated 03/25/2013 09:12

METHOD BLANK SUMMARY

Login Number: L13030527
Blank File ID: T2.032113.095518
Prep Date: 03/18/13 09:24
Analyzed Date: 03/21/13 09:55
Analyst: QX

Work Group: WG424195
Blank Sample ID: WG423854-02
Instrument ID: ICP-THERMO2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423854-03	T2.032013.151932	03/20/13 15:19	01
35BWW14	L13030527-01	T2.032013.162405	03/20/13 16:24	01
MW 4-1	L13030527-02	T2.032013.162727	03/20/13 16:27	01
MW 4-2	L13030527-03	T2.032013.163739	03/20/13 16:37	01
MW 4-2 D	L13030527-04	T2.032013.164102	03/20/13 16:41	01
MW 4-2 MS	L13030527-05	T2.032013.164425	03/20/13 16:44	01
MW 4-2 MSD	L13030527-06	T2.032013.164737	03/20/13 16:47	01
MW 4-3	L13030527-07	T2.032013.165049	03/20/13 16:50	01
FIELD BLANK 9MARCH2013	L13030527-09	T2.032013.165410	03/20/13 16:54	01
LCS	WG423854-03	T2.032113.095845	03/21/13 09:58	02
35BWW14	L13030527-01	T2.032113.100201	03/21/13 10:02	02
MW 4-1	L13030527-02	T2.032113.100523	03/21/13 10:05	02
MW 4-2	L13030527-03	T2.032113.100848	03/21/13 10:08	02
MW 4-2 MS	L13030527-05	T2.032113.101211	03/21/13 10:12	02
MW 4-2 MSD	L13030527-06	T2.032113.101524	03/21/13 10:15	02
MW 4-2 D	L13030527-04	T2.032113.103240	03/21/13 10:32	02
MW 4-3	L13030527-07	T2.032113.103602	03/21/13 10:36	02
FIELD BLANK 9MARCH2013	L13030527-09	T2.032113.103923	03/21/13 10:39	02

Report Name: BLANK_SUMMARY
PDF File ID: 2795827
Report generated 03/25/2013 09:12

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG424109
Blank File ID: T2.032213.170641
Blank Sample ID: WG424073-02
Prep Date: 03/19/13 16:43
Instrument ID: ICP-THERMO2
Analyzed Date: 03/22/13 17:06
Method: 6010B
Analyst: QX

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG424073-03	T2.032213.171009	03/22/13 17:10	01
MW-58	L13030527-29	T2.032213.171325	03/22/13 17:13	01
35BWW04	L13030527-30	T2.032213.171647	03/22/13 17:16	01
35BWW06	L13030527-31	T2.032213.172010	03/22/13 17:20	01
35BWW05	L13030527-32	T2.032213.172340	03/22/13 17:23	01

Report Name: BLANK_SUMMARY
PDF File ID: 2795827
Report generated 03/25/2013 09:12

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/18/13 13:59 Sample ID: WG423919-02
Instrument ID: PE-ICP2 Run Date: 03/18/13 18:00 Prep Method: 3005A
File ID: P2.031813.180038 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG423950 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-18-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.100	0.0508	1	J
Calcium, Total	0.100	0.200	0.100	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.00500	0.0100	0.00500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2791867
20-MAR-2013 08:23

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13030527 Prep Date:03/18/13 09:24 Sample ID:WG423854-02
Instrument ID:ICP-THERMO2 Run Date:03/20/13 15:16 Prep Method:3005A
File ID:T2.032013.151605 Analyst:KHR Method:6010B
Workgroup (AAB#):WG424195 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-TH-20-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.100	0.0500	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.00500	0.0100	0.00500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2795828
25-MAR-2013 09:12

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/18/13 09:24 Sample ID: WG423854-02
Instrument ID: ICP-THERMO2 Run Date: 03/21/13 09:55 Prep Method: 3005A
File ID: T2.032113.095518 Analyst: QX Method: 6010B
Workgroup (AAB#): WG424195 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-21-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Calcium, Total	0.100	0.200	0.100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2795828
25-MAR-2013 09:12

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/19/13 16:43 Sample ID: WG424073-02
Instrument ID: ICP-THERMO2 Run Date: 03/22/13 17:06 Prep Method: 3005A
File ID: T2.032213.170641 Analyst: QX Method: 6010B
Workgroup (AAB#): WG424109 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-22-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.100	0.0500	1	U
Calcium, Total	0.100	0.200	0.100	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.00500	0.0100	0.00500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2795828
25-MAR-2013 09:12

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/18/2013 Sample ID: WG423919-03
Instrument ID: PE-ICP2 Run Time: 18:03 Prep Method: 3005A
File ID: P2.031813.180338 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG423950 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD56573 Cal ID: PE-ICP-18-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	5.00	4.90	98.0	85 - 115	
Calcium, Total	5.00	5.07	101	85 - 115	
Iron, Total	2.00	1.96	98.0	85 - 115	
Magnesium, Total	5.00	4.87	97.4	85 - 115	
Potassium, Total	25.0	25.6	102	85 - 115	
Sodium, Total	25.0	25.6	102	85 - 115	
Strontium, Total	0.500	0.501	100	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2791868
Report generated: 03/20/2013 08:23

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/20/2013 Sample ID: WG423854-03
Instrument ID: ICP-THERMO2 Run Time: 15:19 Prep Method: 3005A
File ID: T2.032013.151932 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG424195 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD56573 Cal ID: ICP-TH-20-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	5.00	4.86	97.3	85 - 115	
Iron, Total	2.00	1.96	98.2	85 - 115	
Magnesium, Total	5.00	4.97	99.3	85 - 115	
Potassium, Total	25.0	24.4	97.7	85 - 115	
Sodium, Total	25.0	24.6	98.3	85 - 115	
Strontium, Total	0.500	0.495	98.9	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2795829
Report generated: 03/25/2013 09:12

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/21/2013 Sample ID: WG423854-03
Instrument ID: ICP-THERMO2 Run Time: 09:58 Prep Method: 3005A
File ID: T2.032113.095845 Analyst: QX Method: 6010B
Workgroup (AAB#): WG424195 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD56573 Cal ID: ICP-TH-21-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Calcium, Total	5.00	5.11	102	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2795829
Report generated: 03/25/2013 09:12

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/22/2013 Sample ID: WG424073-03
Instrument ID: ICP-THERMO2 Run Time: 17:10 Prep Method: 3005A
File ID: T2.032213.171009 Analyst: QX Method: 6010B
Workgroup (AAB#): WG424109 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD56573 Cal ID: ICP-TH-22-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	5.00	4.93	98.5	85 - 115	
Calcium, Total	5.00	4.86	97.2	85 - 115	
Iron, Total	2.00	1.99	99.5	85 - 115	
Magnesium, Total	5.00	4.97	99.4	85 - 115	
Potassium, Total	25.0	24.8	99.0	85 - 115	
Sodium, Total	25.0	24.8	99.2	85 - 115	
Strontium, Total	0.500	0.501	100	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2795829
Report generated: 03/25/2013 09:12

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13030527 Cal ID:PE-ICP2- 18-MAR-13 Worknum:WG423950

Instrument ID:PE-ICP2 Contract #: Prep Method:3005A

Parent ID:L13030527-19 File ID:P2.031813.183356 Dil:1 Method:6010B

Sample ID:L13030527-20 MS File ID:P2.031813.183558 Dil:1 Matrix:Water

Sample ID:L13030527-21 MSD File ID:P2.031813.183801 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	10.3	5.00	20.9	212	5.00	19.9	193	4.82	80 - 120	20	*
Calcium, Total	3.31	5.00	7.92	92.3	5.00	8.22	98.2	3.68	80 - 120	20	
Iron, Total	11.7	2.00	13.1	72.8	2.00	12.5	40.5	5.05	80 - 120	20	*
Magnesium, Total	2.29	5.00	7.02	94.5	5.00	7.16	97.3	1.96	80 - 120	20	
Potassium, Total	1.72	25.0	25.8	96.4	25.0	26.9	101	4.04	80 - 120	20	
Sodium, Total	31.6	25.0	55.2	94.5	25.0	57.9	105	4.70	80 - 120	20	
Strontium, Total	0.111	0.500	0.590	95.8	0.500	0.609	99.7	3.18	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2791869

Report generated 03/20/2013 08:23

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13030527 Cal ID: ICP-THERMO2- 20-MAR-13 Worknum:WG424195

Instrument ID:ICP-THERMO2 Contract #: Prep Method:3005A

Parent ID:L13030527-03 File ID:T2.032013.163739 Dil:1 Method:6010B

Sample ID:L13030527-05 MS File ID:T2.032013.164425 Dil:1 Matrix:Water

Sample ID:L13030527-06 MSD File ID:T2.032013.164737 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	5.00	4.89	97.9	5.00	4.98	99.6	1.80	80 - 120	20	
Iron, Total	0.0773	2.00	2.08	100	2.00	2.11	102	1.26	80 - 120	20	
Magnesium, Total	5.13	5.00	10.3	104	5.00	10.5	107	1.72	80 - 120	20	
Potassium, Total	1.10	25.0	25.8	98.9	25.0	26.3	101	1.70	80 - 120	20	
Sodium, Total	88.1	25.0	112	96.8	25.0	110	89.5	1.63	80 - 120	20	
Strontium, Total	0.274	0.500	0.788	103	0.500	0.791	103	0.432	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2795830

Report generated 03/21/2013 15:07

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13030527 Cal ID: ICP-THERMO2- 21-MAR-13 Worknum:WG424195

Instrument ID:ICP-THERMO2 Contract #: Prep Method:3005A

Parent ID:L13030527-03 File ID:T2.032113.100848 Dil:1 Method:6010B

Sample ID:L13030527-05 MS File ID:T2.032113.101211 Dil:1 Matrix:Water

Sample ID:L13030527-06 MSD File ID:T2.032113.101524 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Calcium, Total	10.2	5.00	15.5	105	5.00	15.2	100	1.60	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2795830

Report generated 03/21/2013 15:07

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13030527 Cal ID:ICP-THERMO2- Worknum:WG424109
Instrument ID:ICP-THERMO2 Contract #: Method:6010B
Parent ID:WG424073-01 File ID:T2.032213.180454 Dil:1 Matrix:WATER
Sample ID:WG424073-04 MS File ID:T2.032213.180816 Dil:1 Units:mg/L
Sample ID:WG424073-05 MSD File ID:T2.032213.181129 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum	0.0656	5.00	5.08	100	5.00	5.17	102	1.76	80 - 120	20	
Calcium	48.7	5.00	52.3	71.4	5.00	53.4	93.8	2.12	80 - 120	20	*
Iron	0.0644	2.00	2.10	102	2.00	2.14	104	2.14	80 - 120	20	
Magnesium	7.82	5.00	12.7	98.5	5.00	13.3	110	4.28	80 - 120	20	
Potassium	2.62	25.0	28.0	102	25.0	28.8	105	2.56	80 - 120	20	
Sodium	34.0	25.0	59.2	101	25.0	61.0	108	3.08	80 - 120	20	
Strontium	0.929	0.500	1.43	101	0.500	1.48	110	3.13	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2799376
Report generated 03/25/2013 09:30

Microbac Laboratories Inc.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13030527 Cal ID:ICP-THERMO2- Worknum:WG424195

Instrument ID:ICP-THERMO2 Contract #: Method:6010B

Parent ID:WG423854-01 File ID:T2.032013.163739 Dil:1 Matrix:WATER

Sample ID:WG423854-04 MS File ID:T2.032013.164425 Dil:1 Units:mg/L

Sample ID:WG423854-05 MSD File ID:T2.032013.164737 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	5.00	4.89	97.9	5.00	4.98	99.6	1.80	80 - 120	20	
Iron, Total	0.0773	2.00	2.08	100	2.00	2.11	102	1.26	80 - 120	20	
Magnesium, Total	5.13	5.00	10.3	104	5.00	10.5	107	1.72	80 - 120	20	
Potassium, Total	1.10	25.0	25.8	98.9	25.0	26.3	101	1.70	80 - 120	20	
Sodium, Total	88.1	25.0	112	96.8	25.0	110	89.5	1.63	80 - 120	20	
Strontium, Total	0.274	0.500	0.788	103	0.500	0.791	103	0.432	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011

PDF File ID: 2799376

Report generated 03/25/2013 09:30

Loginnum:L13030527 Cal ID:ICP-THERMO2- Worknum:WG424195
Instrument ID:ICP-THERMO2 Contract #: Method:6010B
Parent ID:WG423854-01 File ID:T2.032113.100848 Dil:1 Matrix:WATER
Sample ID:WG423854-04 MS File ID:T2.032113.101211 Dil:1 Units:mg/L
Sample ID:WG423854-05 MSD File ID:T2.032113.101524 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Calcium, Total	10.2	5.00	15.5	105	5.00	15.2	100	1.60	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2799376
Report generated 03/25/2013 09:30

METHOD BLANK SUMMARY

Login Number:	L13030527	**Work Group:**	WG423871
Blank File ID:	NI.031813.114159	**Blank Sample ID:**	WG423803-03
Prep Date:	03/18/13 06:23	**Instrument ID:**	ICP-MS2
Analyzed Date:	03/18/13 11:41	**Method:**	6020
Analyst:	JYH		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423803-04	NI.031813.114521	03/18/13 11:45	01
MW 4-2	L13030527-03	NI.031813.114844	03/18/13 11:48	01
MW 4-2 MS	L13030527-05	NI.031813.115207	03/18/13 11:52	01
MW 4-2 MSD	L13030527-06	NI.031813.115529	03/18/13 11:55	01
35BWW14	L13030527-01	NI.031813.115852	03/18/13 11:58	01
MW 4-1	L13030527-02	NI.031813.120215	03/18/13 12:02	01
DUP	WG423803-07	NI.031813.133854	03/18/13 13:38	01
MW 4-1	L13030527-02	NI.032013.121726	03/20/13 12:17	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2792198
Report generated 03/22/2013 15:01

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG423922
Blank File ID: NI.031813.154401
Blank Sample ID: WG423812-02
Prep Date: 03/18/13 07:17
Instrument ID: ICP-MS2
Analyzed Date: 03/18/13 15:44
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423812-03	NI.031813.154724	03/18/13 15:47	01
DUP	WG423812-06	NI.031813.160054	03/18/13 16:00	01
MW 4-2 D	L13030527-04	NI.031813.160417	03/18/13 16:04	01
MW 4-3	L13030527-07	NI.031813.162436	03/18/13 16:24	01
FIELD BLANK 9MARCH2013	L13030527-09	NI.031813.162759	03/18/13 16:27	01
35BWW09	L13030527-10	NI.031813.163122	03/18/13 16:31	01
35BWW08	L13030527-11	NI.031813.163444	03/18/13 16:34	01
35BWW08D	L13030527-12	NI.031813.163807	03/18/13 16:38	01
MW1-1	L13030527-13	NI.031813.164129	03/18/13 16:41	01
MW1-2	L13030527-15	NI.031813.164452	03/18/13 16:44	01
FIELD BLANK 11MARCH2013	L13030527-17	NI.031813.164814	03/18/13 16:48	01
MW2-1	L13030527-18	NI.031813.165137	03/18/13 16:51	01

Report Name: BLANK_SUMMARY
PDF File ID: 2792198
Report generated 03/22/2013 15:01

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG423996
Blank File ID: NI.032013.133612
Blank Sample ID: WG423957-02
Prep Date: 03/19/13 06:26
Instrument ID: ICP-MS2
Analyzed Date: 03/20/13 13:36
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423957-03	NI.032013.133934	03/20/13 13:39	01
LCS	WG423957-03	NI.032113.102349	03/21/13 10:23	02
MW2-2	L13030527-19	NI.032113.102712	03/21/13 10:27	01
MW2-2 MS	L13030527-20	NI.032113.103035	03/21/13 10:30	01
MW2-2 MSD	L13030527-21	NI.032113.103357	03/21/13 10:33	01
MW2-3	L13030527-22	NI.032113.103719	03/21/13 10:37	01
MW3-1	L13030527-23	NI.032113.105500	03/21/13 10:55	01
MW3-2	L13030527-24	NI.032113.105822	03/21/13 10:58	01
MW2-2	L13030527-19	NI.032113.111514	03/21/13 11:15	DL01
MW2-2 MS	L13030527-20	NI.032113.111836	03/21/13 11:18	DL01
MW2-2 MSD	L13030527-21	NI.032113.112159	03/21/13 11:21	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2792198
Report generated 03/22/2013 15:01

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG423996
Blank File ID: NI.032113.102027
Blank Sample ID: WG423957-02
Prep Date: 03/19/13 06:26
Instrument ID: ICP-MS2
Analyzed Date: 03/21/13 10:20
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG423957-03	NI.032013.133934	03/20/13 13:39	01
LCS	WG423957-03	NI.032113.102349	03/21/13 10:23	02
MW2-2	L13030527-19	NI.032113.102712	03/21/13 10:27	01
MW2-2 MS	L13030527-20	NI.032113.103035	03/21/13 10:30	01
MW2-2 MSD	L13030527-21	NI.032113.103357	03/21/13 10:33	01
MW2-3	L13030527-22	NI.032113.103719	03/21/13 10:37	01
MW3-1	L13030527-23	NI.032113.105500	03/21/13 10:55	01
MW3-2	L13030527-24	NI.032113.105822	03/21/13 10:58	01
MW2-2	L13030527-19	NI.032113.111514	03/21/13 11:15	DL01
MW2-2 MS	L13030527-20	NI.032113.111836	03/21/13 11:18	DL01
MW2-2 MSD	L13030527-21	NI.032113.112159	03/21/13 11:21	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2792198
Report generated 03/22/2013 15:01

METHOD BLANK SUMMARY

Login Number: L13030527
Work Group: WG424231
Blank File ID: NI.032213.123238
Blank Sample ID: WG424182-02
Prep Date: 03/20/13 12:44
Instrument ID: ICP-MS2
Analyzed Date: 03/22/13 12:32
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG424182-03	NI.032213.123601	03/22/13 12:36	01
DUP	WG424182-06	NI.032213.124932	03/22/13 12:49	01
MW3-2 D	L13030527-25	NI.032213.125254	03/22/13 12:52	01
MW3-3	L13030527-27	NI.032213.131328	03/22/13 13:13	01
FIELD BLANK 12MARCH2013	L13030527-28	NI.032213.131651	03/22/13 13:16	01
MW-58	L13030527-29	NI.032213.132014	03/22/13 13:20	01
35BWW04	L13030527-30	NI.032213.132336	03/22/13 13:23	01
35BWW06	L13030527-31	NI.032213.132659	03/22/13 13:26	01
35BWW05	L13030527-32	NI.032213.133022	03/22/13 13:30	01

Report Name: BLANK_SUMMARY
PDF File ID: 2792198
Report generated 03/22/2013 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13030527 Prep Date:03/18/13 06:23 Sample ID:WG423803-03
Instrument ID:ICP-MS2 Run Date:03/18/13 11:41 Prep Method:3015
File ID:NI.031813.114159 Analyst:JYH Method:6020
Workgroup (AAB#):WG423871 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-MS-18-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2792199
22-MAR-2013 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/18/13 07:17 Sample ID: WG423812-02
Instrument ID: ICP-MS2 Run Date: 03/18/13 15:44 Prep Method: 3015
File ID: NI.031813.154401 Analyst: JYH Method: 6020
Workgroup (AAB#): WG423922 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-18-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2792199
22-MAR-2013 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/19/13 06:26 Sample ID: WG423957-02
Instrument ID: ICP-MS2 Run Date: 03/20/13 13:36 Prep Method: 3015
File ID: NI.032013.133612 Analyst: JYH Method: 6020
Workgroup (AAB#): WG423996 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-20-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2792199
22-MAR-2013 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/19/13 06:26 Sample ID: WG423957-02
Instrument ID: ICP-MS2 Run Date: 03/21/13 10:20 Prep Method: 3015
File ID: NI.032113.102027 Analyst: JYH Method: 6020
Workgroup (AAB#): WG423996 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-21-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00176	1	J
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2792199
22-MAR-2013 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13030527 Prep Date: 03/20/13 12:44 Sample ID: WG424182-02
Instrument ID: ICP-MS2 Run Date: 03/22/13 12:32 Prep Method: 3015
File ID: NI.032213.123238 Analyst: JYH Method: 6020
Workgroup (AAB#): WG424231 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-22-MAR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2792199
22-MAR-2013 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/18/2013 Sample ID: WG423803-04
Instrument ID: ICP-MS2 Run Time: 11:45 Prep Method: 3015
File ID: NI.031813.114521 Analyst: JYH Method: 6020
Workgroup (AAB#): WG423871 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD53715 Cal ID: ICP-MS-18-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0636	102	80 - 120	
Barium, Total	0.0625	0.0635	102	80 - 120	
Cadmium, Total	0.0625	0.0648	104	80 - 120	
Chromium, Total	0.0625	0.0653	104	80 - 120	
Copper, Total	0.0625	0.0663	106	80 - 120	
Lead, Total	0.0625	0.0637	102	80 - 120	
Manganese, Total	0.0625	0.0638	102	80 - 120	
Nickel, Total	0.0625	0.0655	105	80 - 120	
Selenium, Total	0.0625	0.0670	107	80 - 120	
Thallium, Total	0.0625	0.0631	101	80 - 120	
Vanadium, Total	0.0625	0.0657	105	80 - 120	
Zinc, Total	0.0625	0.0685	110	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2792200
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/18/2013 Sample ID: WG423812-03
Instrument ID: ICP-MS2 Run Time: 15:47 Prep Method: 3015
File ID: NI.031813.154724 Analyst: JYH Method: 6020
Workgroup (AAB#): WG423922 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD53715 Cal ID: ICP-MS-18-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0631	101	80 - 120	
Barium, Total	0.0625	0.0638	102	80 - 120	
Cadmium, Total	0.0625	0.0632	101	80 - 120	
Chromium, Total	0.0625	0.0651	104	80 - 120	
Copper, Total	0.0625	0.0661	106	80 - 120	
Lead, Total	0.0625	0.0650	104	80 - 120	
Manganese, Total	0.0625	0.0675	108	80 - 120	
Nickel, Total	0.0625	0.0651	104	80 - 120	
Selenium, Total	0.0625	0.0623	99.6	80 - 120	
Thallium, Total	0.0625	0.0630	101	80 - 120	
Vanadium, Total	0.0625	0.0642	103	80 - 120	
Zinc, Total	0.0625	0.0683	109	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2792200
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/20/2013 Sample ID: WG423957-03
Instrument ID: ICP-MS2 Run Time: 13:39 Prep Method: 3015
File ID: NI.032013.133934 Analyst: JYH Method: 6020
Workgroup (AAB#): WG423996 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD53715 Cal ID: ICP-MS-20-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0668	107	80 - 120	
Barium, Total	0.0625	0.0670	107	80 - 120	
Cadmium, Total	0.0625	0.0661	106	80 - 120	
Chromium, Total	0.0625	0.0601	96.1	80 - 120	
Copper, Total	0.0625	0.0700	112	80 - 120	
Lead, Total	0.0625	0.0655	105	80 - 120	
Manganese, Total	0.0625	0.0634	101	80 - 120	
Nickel, Total	0.0625	0.0665	106	80 - 120	
Selenium, Total	0.0625	0.0618	98.8	80 - 120	
Thallium, Total	0.0625	0.0663	106	80 - 120	
Vanadium, Total	0.0625	0.0583	93.3	80 - 120	
Zinc, Total	0.0625	0.0688	110	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2792200
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/21/2013 Sample ID: WG423957-03
Instrument ID: ICP-MS2 Run Time: 10:23 Prep Method: 3015
File ID: NI.032113.102349 Analyst: JYH Method: 6020
Workgroup (AAB#): WG423996 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD53715 Cal ID: ICP-MS-21-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0659	106	80 - 120	
Barium, Total	0.0625	0.0664	106	80 - 120	
Cadmium, Total	0.0625	0.0667	107	80 - 120	
Chromium, Total	0.0625	0.0652	104	80 - 120	
Copper, Total	0.0625	0.0703	112	80 - 120	
Lead, Total	0.0625	0.0679	109	80 - 120	
Manganese, Total	0.0625	0.0656	105	80 - 120	
Nickel, Total	0.0625	0.0678	108	80 - 120	
Selenium, Total	0.0625	0.0656	105	80 - 120	
Thallium, Total	0.0625	0.0667	107	80 - 120	
Vanadium, Total	0.0625	0.0652	104	80 - 120	
Zinc, Total	0.0625	0.0662	106	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2792200
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13030527 Run Date: 03/22/2013 Sample ID: WG424182-03
Instrument ID: ICP-MS2 Run Time: 12:36 Prep Method: 3015
File ID: NI.032213.123601 Analyst: JYH Method: 6020
Workgroup (AAB#): WG424231 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD53715 Cal ID: ICP-MS-22-MAR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0629	101	80 - 120	
Barium, Total	0.0625	0.0624	99.9	80 - 120	
Cadmium, Total	0.0625	0.0635	102	80 - 120	
Chromium, Total	0.0625	0.0619	99.0	80 - 120	
Copper, Total	0.0625	0.0680	109	80 - 120	
Lead, Total	0.0625	0.0650	104	80 - 120	
Manganese, Total	0.0625	0.0632	101	80 - 120	
Nickel, Total	0.0625	0.0644	103	80 - 120	
Selenium, Total	0.0625	0.0627	100	80 - 120	
Thallium, Total	0.0625	0.0628	100	80 - 120	
Vanadium, Total	0.0625	0.0632	101	80 - 120	
Zinc, Total	0.0625	0.0668	107	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2792200
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13030527 Cal ID: ICP-MS2- 18-MAR-13 Worknum:WG423871

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13030527-03 File ID:NI.031813.114844 Dil:1 Method:6020

Sample ID:L13030527-05 MS File ID:NI.031813.115207 Dil:1 Matrix:Water

Sample ID:L13030527-06 MSD File ID:NI.031813.115529 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0683	109	0.0625	0.0670	107	1.86	75 - 125	20	
Barium, Total	0.0567	0.0625	0.126	111	0.0625	0.124	107	2.07	75 - 125	20	
Cadmium, Total	0.00154	0.0625	0.0694	109	0.0625	0.0675	106	2.74	75 - 125	20	
Chromium, Total	ND	0.0625	0.0687	110	0.0625	0.0670	107	2.54	75 - 125	20	
Copper, Total	ND	0.0625	0.0678	108	0.0625	0.0657	105	3.20	75 - 125	20	
Lead, Total	ND	0.0625	0.0681	109	0.0625	0.0672	108	1.24	75 - 125	20	
Manganese, Total	0.123	0.0625	0.201	124	0.0625	0.203	128	1.25	75 - 125	20	*
Nickel, Total	0.00237	0.0625	0.0690	107	0.0625	0.0681	105	1.30	75 - 125	20	
Selenium, Total	0.00127	0.0625	0.0694	109	0.0625	0.0668	105	3.94	75 - 125	20	
Thallium, Total	0.000184	0.0625	0.0673	107	0.0625	0.0664	106	1.26	75 - 125	20	
Vanadium, Total	0.00401	0.0625	0.0725	110	0.0625	0.0710	107	2.00	75 - 125	20	
Zinc, Total	ND	0.0625	0.0734	117	0.0625	0.0722	116	1.56	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2792201
Report generated 03/21/2013 13:01

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13030527 Cal ID: ICP-MS2- 21-MAR-13 Worknum:WG423996

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13030527-19 File ID:NI.032113.102712 Dil:1 Method:6020

Sample ID:L13030527-20 MS File ID:NI.032113.103035 Dil:1 Matrix:Water

Sample ID:L13030527-21 MSD File ID:NI.032113.103357 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0409	65.5	0.0625	0.0535	85.6	26.7	75 - 125	20	*#
Barium, Total	0.138	0.0625	0.191	85.1	0.0625	0.174	58.4	9.14	75 - 125	20	*
Cadmium, Total	0.00219	0.0625	0.0626	96.6	0.0625	0.0650	101	3.83	75 - 125	20	
Chromium, Total	0.0110	0.0625	0.0662	88.3	0.0625	0.0730	99.1	9.71	75 - 125	20	
Copper, Total	0.00740	0.0625	0.0671	95.5	0.0625	0.0712	102	5.96	75 - 125	20	
Lead, Total	0.00542	0.0625	0.0668	98.2	0.0625	0.0709	105	6.05	75 - 125	20	
Manganese, Total	0.0596	0.0625	0.108	77	0.0625	0.117	91.4	8.04	75 - 125	20	
Nickel, Total	0.0140	0.0625	0.0722	93.1	0.0625	0.0796	105	9.81	75 - 125	20	
Selenium, Total	0.000743	0.0625	0.0550	86.9	0.0625	0.0626	99	12.9	75 - 125	20	
Thallium, Total	0.000173	0.0625	0.0620	98.9	0.0625	0.0650	104	4.82	75 - 125	20	
Vanadium, Total	0.0211	0.0625	0.0729	82.8	0.0625	0.0830	99.1	13.0	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2792201

Report generated 03/21/2013 13:01

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13030527 Cal ID:ICP-MS2- 21-MAR-13 Worknum:WG423996

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13030527-19 File ID:NI.032113.111514 Dil:2 Method:6020

Sample ID:L13030527-20 MS File ID:NI.032113.111836 Dil:2 Matrix:Water

Sample ID:L13030527-21 MSD File ID:NI.032113.112159 Dil:2 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Zinc, Total	0.266	0.0625	0.382	185	0.0625	0.355	142	7.34	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2792201
Report generated 03/21/2013 13:01

Microbac Laboratories Inc.
MS REPORT

Loginnum: L13030527 Cal ID: ICP-MS2 - 18-MAR-13 Worknum: WG423871
Instrument ID: ICP-MS2 Contract #: Method: 6020
Parent ID: L13030527-03 File ID: NI.031813.114844 Dil: 1 Matrix: Water
Sample ID: L13030527-05 MS File ID: NI.031813.115207 Dil: 1 Units: mg/L
Sample ID: L13030527-06 MSD File ID: NI.031813.115529 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec
Antimony, Total	ND	0.0625	0.0683	109
Barium, Total	0.0567	0.0625	0.126	111
Cadmium, Total	0.00154	0.0625	0.0694	109
Chromium, Total	ND	0.0625	0.0687	110
Copper, Total	ND	0.0625	0.0678	108
Lead, Total	ND	0.0625	0.0681	109
Manganese, Total	0.123	0.0625	0.201	125
Nickel, Total	0.00237	0.0625	0.0690	107
Selenium, Total	0.00127	0.0625	0.0694	109
Thallium, Total	0.000184	0.0625	0.0673	107
Vanadium, Total	0.00401	0.0625	0.0725	110
Zinc, Total	ND	0.0625	0.0734	117

* EXCEEDS %REC LIMIT

EXCEEDS RPD LIMIT

SAMPLE_MS - Modified 06/27/2008
PDF File ID: 2798769
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
MS REPORT

Loginnum:L13030527 Cal ID:ICP-MS2 18-MAR-13 Worknum:WG423871
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:L13030527-03 File ID:NI.031813.114844 Dil: 1 Matrix:Water
Sample ID:L13030527-05 MS File ID:NI.031813.115207 Dil: 1 Units:mg/L
Sample ID:L13030527-06 MSD File ID:NI.031813.115529 Dil: 1

Analyte	Parent	MSD Spiked	MSD Found	MSD %Rec	%Rec Limits	Q
Antimony, Total		0.0625	0.0670	107	75 - 125	
Barium, Total		0.0625	0.124	108	75 - 125	
Cadmium, Total		0.0625	0.0675	106	75 - 125	
Chromium, Total		0.0625	0.0670	107	75 - 125	
Copper, Total		0.0625	0.0657	105	75 - 125	
Lead, Total		0.0625	0.0672	108	75 - 125	
Manganese, Total		0.0625	0.203	128	75 - 125	*
Nickel, Total		0.0625	0.0681	105	75 - 125	
Selenium, Total		0.0625	0.0668	105	75 - 125	
Thallium, Total		0.0625	0.0664	106	75 - 125	
Vanadium, Total		0.0625	0.0710	107	75 - 125	
Zinc, Total		0.0625	0.0722	116	75 - 125	

* EXCEEDS %REC LIMIT

EXCEEDS RPD LIMIT

SAMPLE_MS - Modified 06/27/2008
PDF File ID: 2798769
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
MS REPORT

Loginnum: L13030527 Cal ID: ICP-MS2 - 21-MAR-13 Worknum: WG423996
Instrument ID: ICP-MS2 Contract #: Method: 6020
Parent ID: L13030527-19 File ID: NI.032113.102712 Dil: 1 Matrix: Water
Sample ID: L13030527-20 MS File ID: NI.032113.103035 Dil: 1 Units: mg/L
Sample ID: L13030527-21 MSD File ID: NI.032113.103357 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec
Antimony, Total	ND	0.0625	0.0409	65.4
Barium, Total	0.138	0.0625	0.191	84.8
Cadmium, Total	0.00219	0.0625	0.0626	96.7
Chromium, Total	0.0110	0.0625	0.0662	88.3
Copper, Total	0.00740	0.0625	0.0671	95.5
Lead, Total	0.00542	0.0625	0.0668	98.2
Manganese, Total	0.0596	0.0625	0.108	77.4
Nickel, Total	0.0140	0.0625	0.0722	93.1
Selenium, Total	0.000743	0.0625	0.0550	86.8
Thallium, Total	0.000173	0.0625	0.0620	98.9
Vanadium, Total	0.0211	0.0625	0.0729	82.9

* EXCEEDS %REC LIMIT

EXCEEDS RPD LIMIT

SAMPLE_MS - Modified 06/27/2008
PDF File ID: 2798769
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
MS REPORT

Loginnum:L13030527 Cal ID:ICP-MS2 21-MAR-13 Worknum:WG423996
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:L13030527-19 File ID:NI.032113.102712 Dil: 1 Matrix:Water
Sample ID:L13030527-20 MS File ID:NI.032113.103035 Dil: 1 Units:mg/L
Sample ID:L13030527-21 MSD File ID:NI.032113.103357 Dil: 1

Analyte	Parent	MSD Spiked	MSD Found	MSD %Rec	%Rec Limits	Q
Antimony, Total		0.0625	0.0535	85.6	75 - 125	*
Barium, Total		0.0625	0.174	57.6	75 - 125	*
Cadmium, Total		0.0625	0.0650	100	75 - 125	
Chromium, Total		0.0625	0.0730	99.2	75 - 125	
Copper, Total		0.0625	0.0712	102	75 - 125	
Lead, Total		0.0625	0.0709	105	75 - 125	
Manganese, Total		0.0625	0.117	91.8	75 - 125	
Nickel, Total		0.0625	0.0796	105	75 - 125	
Selenium, Total		0.0625	0.0626	99.0	75 - 125	
Thallium, Total		0.0625	0.0650	104	75 - 125	
Vanadium, Total		0.0625	0.0830	99.0	75 - 125	

* EXCEEDS %REC LIMIT

EXCEEDS RPD LIMIT

SAMPLE_MS - Modified 06/27/2008
PDF File ID: 2798769
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
MS REPORT

Loginnum: L13030527 Cal ID: ICP-MS2 - 21-MAR-13 Worknum: WG423996
Instrument ID: ICP-MS2 Contract #: Method: 6020
Parent ID: L13030527-19 File ID: NI.032113.111514 Dil: 2 Matrix: Water
Sample ID: L13030527-20 MS File ID: NI.032113.111836 Dil: 2 Units: mg/L
Sample ID: L13030527-21 MSD File ID: NI.032113.112159 Dil: 2

Analyte	Parent	MS Spiked	MS Found	MS %Rec
Zinc, Total	0.266	0.0625	0.382	186

* EXCEEDS %REC LIMIT

EXCEEDS RPD LIMIT

SAMPLE_MS - Modified 06/27/2008
PDF File ID: 2798769
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
MS REPORT

Loginnum: L13030527 Cal ID: ICP-MS2 21-MAR-13 Worknum: WG423996
Instrument ID: ICP-MS2 Contract #: Method: 6020
Parent ID: L13030527-19 File ID: NI.032113.111514 Dil: 2 Matrix: Water
Sample ID: L13030527-20 MS File ID: NI.032113.111836 Dil: 2 Units: mg/L
Sample ID: L13030527-21 MSD File ID: NI.032113.112159 Dil: 2

Analyte	Parent	MSD Spiked	MSD Found	MSD %Rec	%Rec Limits	Q
Zinc, Total		0.0625	0.355	142	75 - 125	*

* EXCEEDS %REC LIMIT

EXCEEDS RPD LIMIT

SAMPLE_MS - Modified 06/27/2008
PDF File ID: 2798769
Report generated: 03/22/2013 15:01

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13030527 Cal ID:ICP-MS2- Worknum:WG423922
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:WG423812-01 File ID:NI.031813.155046 Dil:1 Matrix:WATER
Sample ID:WG423812-04 MS File ID:NI.031813.155409 Dil:1 Units:mg/L
Sample ID:WG423812-05 MSD File ID:NI.031813.155731 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony	0.000521	0.0625	0.0629	99.7	0.0625	0.0630	100	0.261	75 - 125	20	
Barium	0.0494	0.0625	0.109	95.2	0.0625	0.112	101	3.07	75 - 125	20	
Cadmium	ND	0.0625	0.0623	99.7	0.0625	0.0632	101	1.37	75 - 125	20	
Chromium	ND	0.0625	0.0639	102	0.0625	0.0643	103	0.726	75 - 125	20	
Copper	0.00142	0.0625	0.0648	101	0.0625	0.0654	102	0.930	75 - 125	20	
Lead	ND	0.0625	0.0638	102	0.0625	0.0651	104	2.11	75 - 125	20	
Manganese	0.0172	0.0625	0.0802	101	0.0625	0.0835	106	3.97	75 - 125	20	
Nickel	0.00332	0.0625	0.0658	99.9	0.0625	0.0665	101	1.14	75 - 125	20	
Selenium	0.00107	0.0625	0.0634	99.7	0.0625	0.0633	99.6	0.122	75 - 125	20	
Thallium	0.000246	0.0625	0.0631	101	0.0625	0.0643	102	1.91	75 - 125	20	
Vanadium	ND	0.0625	0.0646	103	0.0625	0.0653	104	1.14	75 - 125	20	
Zinc	ND	0.0625	0.0685	110	0.0625	0.0672	107	1.96	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2792792
Report generated 03/22/2013 15:01

Microbac Laboratories Inc.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13030527 Cal ID:ICP-MS2- Worknum:WG423996
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:WG423957-01 File ID:NI.032013.134257 Dil:1 Matrix:WATER
Sample ID:WG423957-04 MS File ID:NI.032013.134619 Dil:1 Units:mg/L
Sample ID:WG423957-05 MSD File ID:NI.032013.134942 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0427	68.3	0.0625	0.0543	86.9	23.9	75 - 125	20	*#
Barium, Total	0.141	0.0625	0.197	90.7	0.0625	0.175	55.5	11.8	75 - 125	20	*
Cadmium, Total	0.00219	0.0625	0.0646	99.8	0.0625	0.0648	100	0.318	75 - 125	20	
Chromium, Total	0.0104	0.0625	0.0628	83.9	0.0625	0.0667	90.0	5.96	75 - 125	20	
Copper, Total	0.00735	0.0625	0.0681	97.2	0.0625	0.0698	99.9	2.50	75 - 125	20	
Lead, Total	0.00530	0.0625	0.0655	96.3	0.0625	0.0668	98.3	1.88	75 - 125	20	
Manganese, Total	0.0580	0.0625	0.108	80.6	0.0625	0.113	87.5	3.89	75 - 125	20	
Nickel, Total	0.0138	0.0625	0.0730	94.8	0.0625	0.0758	99.3	3.78	75 - 125	20	
Selenium, Total	0.000888	0.0625	0.0572	90.2	0.0625	0.0617	97.3	7.52	75 - 125	20	
Thallium, Total	0.000216	0.0625	0.0624	99.4	0.0625	0.0632	101	1.28	75 - 125	20	
Vanadium, Total	0.0187	0.0625	0.0674	78.0	0.0625	0.0734	87.6	8.50	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2792792
Report generated 03/22/2013 15:01

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13030527 Cal ID:ICP-MS2- Worknum:WG423996
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:WG423957-01 File ID:NI.032113.102712 Dil:1 Matrix:WATER
Sample ID:WG423957-04 MS File ID:NI.032113.103035 Dil:1 Units:mg/L
Sample ID:WG423957-05 MSD File ID:NI.032113.103357 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0409	65.5	0.0625	0.0535	85.6	26.7	75 - 125	20	*#
Barium, Total	0.138	0.0625	0.191	85.1	0.0625	0.174	58.4	9.14	75 - 125	20	*
Cadmium, Total	0.00219	0.0625	0.0626	96.6	0.0625	0.0650	101	3.83	75 - 125	20	
Chromium, Total	0.0110	0.0625	0.0662	88.3	0.0625	0.0730	99.1	9.71	75 - 125	20	
Copper, Total	0.00740	0.0625	0.0671	95.5	0.0625	0.0712	102	5.96	75 - 125	20	
Lead, Total	0.00542	0.0625	0.0668	98.2	0.0625	0.0709	105	6.05	75 - 125	20	
Manganese, Total	0.0596	0.0625	0.108	77.0	0.0625	0.117	91.4	8.04	75 - 125	20	
Nickel, Total	0.0140	0.0625	0.0722	93.1	0.0625	0.0796	105	9.81	75 - 125	20	
Selenium, Total	0.000743	0.0625	0.0550	86.9	0.0625	0.0626	99.0	12.9	75 - 125	20	
Thallium, Total	0.000173	0.0625	0.0620	98.9	0.0625	0.0650	104	4.82	75 - 125	20	
Vanadium, Total	0.0211	0.0625	0.0729	82.8	0.0625	0.0830	99.1	13.0	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2792792
Report generated 03/22/2013 15:01

Loginnum:L13030527 Cal ID:ICP-MS2- Worknum:WG423996
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:WG423957-01 File ID:NI.032113.111514 Dil:2 Matrix:WATER
Sample ID:WG423957-04 MS File ID:NI.032113.111836 Dil:2 Units:mg/L
Sample ID:WG423957-05 MSD File ID:NI.032113.112159 Dil:2

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Zinc, Total	0.266	0.0625	0.382	185	0.0625	0.355	142	7.34	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2792792
Report generated 03/22/2013 15:01

Microbac Laboratories Inc.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13030527 Cal ID:ICP-MS2- Worknum:WG424231

Instrument ID:ICP-MS2 Contract #: Method:6020

Parent ID:WG424182-01 File ID:NI.032213.123923 Dil:1 Matrix:WATER

Sample ID:WG424182-04 MS File ID:NI.032213.124246 Dil:1 Units:mg/L

Sample ID:WG424182-05 MSD File ID:NI.032213.124609 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0654	105	0.0625	0.0648	104	0.934	75 - 125	20	
Barium, Total	0.0540	0.0625	0.117	101	0.0625	0.117	100	0.523	75 - 125	20	
Cadmium, Total	ND	0.0625	0.0641	103	0.0625	0.0637	102	0.596	75 - 125	20	
Chromium, Total	0.00207	0.0625	0.0652	101	0.0625	0.0652	101	0.00537	75 - 125	20	
Copper, Total	0.00936	0.0625	0.0727	101	0.0625	0.0703	97.5	3.43	75 - 125	20	
Lead, Total	0.000665	0.0625	0.0659	104	0.0625	0.0655	104	0.548	75 - 125	20	
Manganese, Total	0.0488	0.0625	0.110	98.3	0.0625	0.109	96.5	1.01	75 - 125	20	
Nickel, Total	0.00469	0.0625	0.0685	102	0.0625	0.0670	99.8	2.09	75 - 125	20	
Selenium, Total	0.00352	0.0625	0.0684	104	0.0625	0.0683	104	0.137	75 - 125	20	
Thallium, Total	0.000124	0.0625	0.0649	104	0.0625	0.0642	102	1.05	75 - 125	20	
Vanadium, Total	0.00160	0.0625	0.0679	106	0.0625	0.0677	106	0.357	75 - 125	20	
Zinc, Total	0.0319	0.0625	0.0980	106	0.0625	0.0951	101	3.04	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011

PDF File ID: 2792792

Report generated 03/22/2013 15:01

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13030527 Cal ID:ICP-MS2- Worknum:WG423871
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:WG423803-01 File ID:NI.031813.114844 Dil:1 Matrix:WATER
Sample ID:WG423803-05 MS File ID:NI.031813.115207 Dil:1 Units:mg/L
Sample ID:WG423803-06 MSD File ID:NI.031813.115529 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0683	109	0.0625	0.0670	107	1.86	75 - 125	20	
Barium, Total	0.0567	0.0625	0.126	111	0.0625	0.124	107	2.07	75 - 125	20	
Cadmium, Total	0.00154	0.0625	0.0694	109	0.0625	0.0675	106	2.74	75 - 125	20	
Chromium, Total	ND	0.0625	0.0687	110	0.0625	0.0670	107	2.54	75 - 125	20	
Copper, Total	ND	0.0625	0.0678	108	0.0625	0.0657	105	3.20	75 - 125	20	
Lead, Total	ND	0.0625	0.0681	109	0.0625	0.0672	108	1.24	75 - 125	20	
Manganese, Total	0.123	0.0625	0.201	124	0.0625	0.203	128	1.25	75 - 125	20	*
Nickel, Total	0.00237	0.0625	0.0690	107	0.0625	0.0681	105	1.30	75 - 125	20	
Selenium, Total	0.00127	0.0625	0.0694	109	0.0625	0.0668	105	3.94	75 - 125	20	
Thallium, Total	0.000184	0.0625	0.0673	107	0.0625	0.0664	106	1.26	75 - 125	20	
Vanadium, Total	0.00401	0.0625	0.0725	110	0.0625	0.0710	107	2.00	75 - 125	20	
Zinc, Total	ND	0.0625	0.0734	117	0.0625	0.0722	116	1.56	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2792792
Report generated 03/22/2013 15:01

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
April 1, 2013

ADC – ANTHONY D. CANTER	ADG – APRIL D. GREENE	AJF – AMANDA J. FICKIESEN
AML – TONY M. LONG	AZH – AFTER HOURS	BAF – BRICE A. FENTON
BLG – BRENDA L. GREENWALT	BRG – BRENDA R. GREGORY	CAA – CASSIE A. AUGENSTEIN
CAF – CHERYL A. FLOWERS	CEB – CHAD E. BARNES	CLC – CHRYS L. CRAWFORD
CLS – CARA L. STRICKLER	CLW – CHARISSA L. WINTERS	CPD – CHAD P. DAVIS
CSH – CHRIS S. HILL	CTB – CHRIS T. BUCINA	DDE – DEBRA D. ELLIOTT
DEV – DAVID E. VANDENBERG	DIH – DEANNA I. HESSON	DLB – DAVID L. BUMGARNER
DLP – DOROTHY L. PAYNE	DLR – DIANNA L. RAUCH	DSM – DAVID S. MOSSOR
ECL – ERIC C. LAWSON	EDL – ERIN D. LONG	ERP – ERIN R. PORTER
FJB – FRANCES J. BOLDEN	HJR – HOLLY J. REED	JBK – JEREMY B. KINNEY
JDH – JUSTIN D. HESSON	JKS – JANE K. SCHAAD	JWR – JOHN W. RICHARDS
JWS – JACK W. SHEAVES	JYH – JI Y. HU	KEB – KATIE E. BARNES
KHR – KIM H. RHODES	KRA – KATHY R. ALBERTSON	LKN – LINDA K. NEDEFF
LSB – LESLIE S. BUCINA	MDA – MIKE D. ALBERTSON	MDC – MIKE D. COCHRAN
MES – MARY E. SCHILLING	MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR
MSW – MATT S. WILSON	PDM – PIERCE D. MORRIS	QX – QIN XU
RAH – ROY A. HALSTEAD	REK – BOB E. KYER	RLB – BOB BUCHANAN
RS – ROSEMARY SCOTT	RWC – RODNEY W. CAMPBELL	SEP – SUZANNE J. PAUGH
SLM – STEPHANIE L. MOSSBURG	SLP – SHERI L. PFALZGRAF	TMB – TIFFANY M. BAILEY
TMM – TAMMY M. MORRIS	VC – VICKI COLLIER	WJB – WILL J. BEASLEY
WTD – WADE T. DELONG	XXX – UNAVAILABLE OR SUBCONTRACT	

Microbac Laboratories Inc.
List of Valid Qualifiers
April 01, 2013

Qualkey: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated value; the analyte concentration was less than the RL/LOQ.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 32956

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN

Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD

Location: LONGHORN ARMY AMMUNITION PLANT

Project ID: 3083.001 / B 66490

Sampler (print): CARL JOHNSON JR

Signature: Carl Johnson Jr.

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
35BWW14		X	9 MARCH 2013	0930	WATER	4		3	1		
MW 4-1		X	↓	1100	↓	4		3	1		
MW 4-2		X	↓	1230	↓	4		3	1		
MW-4-2 D		X	↓	1245	↓	4		3	1		
MW-4-2 MS		X	↓	1300	↓	4		3	1		
MW-4-2 MSD		X	↓	1315	↓	4		3	1		
MW 4-3		X	↓	1410	↓	4		3	1		
TRIP BLANKS 9 MARCH 2013		X	↓	-	↓	2		2			TRIP BLANK 9 MARCH 2013
FIELD BLANK 9 MARCH 2013		X	↓	1350	↓	4		3	1		
35BWW09		X	↓	1620	↓	4		3	1		
35BWW08		X	10 MARCH 2013	1430	↓	4		3	1		
35B WW08 D		X	↓	1445	↓	4		3	1		
MW 1-1		X	↓	1600	↓	4		3	1		
TRIP BLANK 10 MARCH 2013		X	↓	-	↓	2		2			
MW 1-2		X	11 March 2013	0930	↓	4		3	1		
TRIP BLANK 11 MARCH 2013		X	↓	-	↓	2		2			
FIELD BLANK 11 MARCH 2013		X	↓	0930	↓	4		3	1		
MW 2-1		X	↓	1230	↓	4		3	1		MW 2-1
MW 2-2		X	↓	1340	↓	4		3	1		
MW 2-2 MS		X	↓	1350	↓	4		3	1		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Carl Johnson Jr.	3/13/2013	1330	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)

Relinquished by: | Date | Time | Received by: (Signature)

Microbac OVD
Received: 03/14/2013 10:31
By: ROSEMARY SCOTT
221000033418

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 2

00838078

COC No. A 32957

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: (410) 278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 30831.001 / B66490

Sampler (print): CARL JOHNSON JR | Signature: Carl Johnson Jr

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	Total METALS													TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MW2-2M50		X	11MARCH 2013	1400	GROUNDWATER	4		3	1														
MW2-3		X	↓	1530	↓	4		3	1														
MW3-1		X	12March 2013	0915	↓	4		3	1														
MW3-2		X	↓	1100	↓	4		3	1														
MW3-2D		X	↓	1115	↓	4		3	1														
TRIPBLANK 12MARCH2013		X	↓	—	—	2		2															
MW3-3		X	↓	1315	GROUNDWATER	4		3	1														
FIELDBLANK 12March 2013		X	↓	1225	↓	4		3	1														
MW-58		X	↓	1445	↓	4		3	1														
35B WW04		X	↓	1550	↓	4		3	1														
35B WW06		X	13March 2013	0915	↓	4		3	1														
35B WW05		X	13March 2013	1050	↓	4		3	1														

Relinquished by: (Signature)	Date	Time	Relinquished by:	Date	Time	Received by: (Signature)
Carl Johnson Jr	3/13/2013	1330				
Relinquished by: (Signature)	Date	Time				

Microbac OVD
Received: 03/14/2013 10:31
By: ROSEMARY SCOTT
221000033418

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00838079

NELAP Addendum - March 7, 2013

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)
Ethylene Glycol (Non-potable Water)
Aroclor 1262 (Non-potable Water)

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Nitroguanidine
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL KNITRO-C-WUV-VIS

Nitrocellulose

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL HPLCOS-HPLC-UV

Nitroguanidine

OVL KNITRO-C-S/UV-VIS

Nitrocellulose

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L13060636

Gene Fabian
Aberdeen Test Center
US Army Aberdeen Center
Aberdeen Proving Ground, MD 21005

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Kathy Albertson – Team Chemist/Data Specialist
(740) 373-4071
Kathy.Albertson@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on July 22 2013

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: Microbac OVD

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
0018975	H	2.0		1015923851810004575000795788995034	
0018741	H	2.0		1015923851810004575000795788995045	
0018976	H	2.0		1015923851810004575000795788995023	
0018613	H	2.0		1002239551810004575000801944418163	

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35BWW08	L13060636-01	06/06/2013 14:10	06/13/2013 11:25
MW 1-1	L13060636-02	06/06/2013 15:30	06/13/2013 11:25
TRIP BLANK 6 JUNE 2013	L13060636-03	06/06/2013 00:01	06/13/2013 11:25
35BWW14	L13060636-04	06/07/2013 10:00	06/13/2013 11:25
35BWW14MS	L13060636-05	06/07/2013 10:20	06/13/2013 11:25
35BWW14MSD	L13060636-06	06/07/2013 10:30	06/13/2013 11:25
MW 4-1	L13060636-07	06/07/2013 12:10	06/13/2013 11:25
MW 4-1 D	L13060636-08	06/07/2013 12:20	06/13/2013 11:25
MW 4-2	L13060636-09	06/07/2013 15:00	06/13/2013 11:25
FIELD BLANK 7 JUNE 2013	L13060636-10	06/07/2013 15:40	06/13/2013 11:25
MW 4-3	L13060636-11	06/07/2013 16:10	06/13/2013 11:25
TRIP BLANK 7 JUNE 2013	L13060636-12	06/07/2013 00:01	06/13/2013 11:25
MW 1-2	L13060636-13	06/10/2013 09:00	06/13/2013 11:25
TRIP BLANK 7 JUNE 2013	L13060636-14	06/10/2013 00:01	06/13/2013 11:25
FIELD BLANK 10 JUNE 2013	L13060636-15	06/10/2013 08:50	06/13/2013 11:25
MW 2-1	L13060636-16	06/10/2013 10:20	06/13/2013 11:25
MW 2-1 MS	L13060636-17	06/10/2013 10:30	06/13/2013 11:25
MW 2-1 MSD	L13060636-18	06/10/2013 10:40	06/13/2013 11:25
MW 2-2	L13060636-19	06/10/2013 11:50	06/13/2013 11:25
MW 2-3	L13060636-20	06/10/2013 13:45	06/13/2013 11:25
MW 3-1	L13060636-21	06/10/2013 15:15	06/13/2013 11:25
MW 3-1 D	L13060636-22	06/10/2013 15:30	06/13/2013 11:25
TRIP BLANK 11 JUNE 2013	L13060636-23	06/11/2013 00:01	06/13/2013 11:25
FIELD BLANK 11 JUNE 2013	L13060636-24	06/11/2013 08:45	06/13/2013 11:25
MW 3-2	L13060636-25	06/11/2013 09:00	06/13/2013 11:25
MW 3-3	L13060636-26	06/11/2013 10:00	06/13/2013 11:25
35BWW04	L13060636-27	06/11/2013 11:20	06/13/2013 11:25
35BWW04 D	L13060636-28	06/11/2013 11:30	06/13/2013 11:25
MW-58	L13060636-29	06/11/2013 12:30	06/13/2013 11:25
35BWW03	L13060636-30	06/11/2013 14:15	06/13/2013 11:25
35BWW09	L13060636-31	06/12/2013 08:15	06/13/2013 11:25
35BWW05	L13060636-32	06/12/2013 10:15	06/13/2013 11:25

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Microbac Laboratories
Case Narrative

Login Number: L13060636
Department: Volatiles
Analyst: Anthony Canter

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: Recoveries out of range were observed for the following analytes: 2-butanone, vinyl acetate. Please see the applicable QC report for a detailed presentation of the failures.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Recoveries out of range were observed for the following analytes: 1,1,2,2-tetrachloroethane, 2-hexanone. Please see the applicable QC report for a detailed presentation of the failures.

Matrix Spikes: Recoveries out of range were observed for the following analytes: 2-chloroethyl vinyl ether, 1,1-dichloroethene, 2-hexanone, tetrachloroethene, trichloroethene. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 66440
Approved By: Michael Albertson

Microbac Laboratories
Case Narrative

Login Number: L13060636
Department: Metals
Analyst: Kim Rhodes
Analyst #2: Qin Xu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG434983 - All acceptance criteria were met.

WG434961 - All acceptance criteria were met.

WG435022 - All acceptance criteria were met.

WG435260 - All acceptance criteria were met.

Matrix Spikes: WG434983 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 06(MSD) met all acceptance criteria.

WG435260 - Sample 16 was chosen by the client for MS/MSD analysis. Samples 17(MS) and 18(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 66358
Approved By: Sheri Pfalzgraf

Microbac Laboratories
Case Narrative

Login Number: L13060636
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG434443 - All acceptance criteria were met.

WG434808 - All acceptance criteria were met.

Matrix Spikes: WG434808 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 06(MSD) met all acceptance criteria. Sample 16 was chosen by the client for MS/MSD analysis. Samples 17(MS) and 18(MSD) met all acceptance criteria.

SAMPLES

Samples: WG434443 - Client sample 26 required a dilution analysis in order to obtain a result for zinc within the linear range.

Narrative ID: 66250
Approved By: Sheri Pfalzgraf

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW08	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434308	**Analyst:**	ADC	**Run Date:**	06/17/2013 20:54
Collect Date:	06/06/2013 14:10	**Dilution:**	1	**File ID:**	6M117562
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.253	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	67.5		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	96.9	80	120	
Toluene-d8	97.0	88	110	
4-Bromofluorobenzene	99.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-01 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW08 **Prep Method:** 3015 **Prep Date:** 06/17/2013 13:44
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/22/2013 08:31
Workgroup #: WG435022 **Analyst:** KHR **Run Date:** 06/22/2013 14:28
Collect Date: 06/06/2013 14:10 **Dilution:** 1 **File ID:** P2.062213.142855
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	33.0		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	19.7		0.500	0.250
Potassium, Total	7440-09-7	1.36		1.00	0.500
Sodium, Total	7440-23-5	148		0.500	0.250
Strontium, Total	7440-24-6	1.20		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-01 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW08 **Prep Method:** 3015 **Prep Date:** 06/18/2013 08:31
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/25/2013 09:20
Workgroup #: WG434808 **Analyst:** JYH **Run Date:** 06/25/2013 10:10
Collect Date: 06/06/2013 14:10 **Dilution:** 1 **File ID:** NI.062513.101003
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0490		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000940		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00990		0.00200	0.00100
Nickel, Total	7440-02-0	0.00206	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0700		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000591	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW 1-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434308	**Analyst:**	ADC	**Run Date:**	06/18/2013 00:02
Collect Date:	06/06/2013 15:30	**Dilution:**	1	**File ID:**	6M117568
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	22.1		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	97.5	80	120	
Toluene-d8	97.6	88	110	
4-Bromofluorobenzene	99.3	86	115	

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-02 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW 1-1 **Prep Method:** 3015 **Prep Date:** 06/17/2013 13:44
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/22/2013 08:31
Workgroup #: WG435022 **Analyst:** KHR **Run Date:** 06/22/2013 14:32
Collect Date: 06/06/2013 15:30 **Dilution:** 1 **File ID:** P2.062213.143200
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	18.5		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	10.3		0.500	0.250
Potassium, Total	7440-09-7	0.959	J	1.00	0.500
Sodium, Total	7440-23-5	121		0.500	0.250
Strontium, Total	7440-24-6	0.626		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-02 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 1-1 **Prep Method:** 3015 **Prep Date:** 06/18/2013 08:31
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/25/2013 09:20
Workgroup #: WG434808 **Analyst:** JYH **Run Date:** 06/25/2013 10:13
Collect Date: 06/06/2013 15:30 **Dilution:** 1 **File ID:** NI.062513.101349
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0501		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000732		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00392		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0368		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00105		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	TRIP BLANK 6 JUNE 2013	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434308	**Analyst:**	ADC	**Run Date:**	06/17/2013 18:20
Collect Date:	06/06/2013 00:01	**Dilution:**	1	**File ID:**	6M117557
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	96.9	80	120	
Toluene-d8	96.7	88	110	
4-Bromofluorobenzene	100	86	115	

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Lab Contact: Kathy Albertson

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ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-04
Client ID: 35BWW14
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/07/2013 10:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/17/2013 21:26
File ID: 6M117563

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2	0.195	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.138	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.162	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	4.27		1.00	0.125
1,2-Dichloroethane	107-06-2	0.310	J	1.00	0.250
1,1-Dichloroethene	75-35-4	44.7		1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2	12.7		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	0.358	J	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	24.0		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	90.9		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4	3.43		1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	97.2	80	120	
Toluene-d8	96.9	88	110	

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4-Bromofluorobenzene	99.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-04 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW14 **Prep Method:** 3015 **Prep Date:** 06/18/2013 09:48
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/22/2013 08:31
Workgroup #: WG434983 **Analyst:** KHR **Run Date:** 06/22/2013 08:58
Collect Date: 06/07/2013 10:00 **Dilution:** 1 **File ID:** P2.062213.085854
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.158	J	0.200	0.100
Calcium, Total	7440-70-2	13.4		0.500	0.250
Iron, Total	7439-89-6	0.450		0.100	0.0500
Magnesium, Total	7439-95-4	7.24		0.500	0.250
Potassium, Total	7440-09-7	0.995	J	1.00	0.500
Sodium, Total	7440-23-5	84.7		0.500	0.250
Strontium, Total	7440-24-6	0.482		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13060636-04 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW14 **Prep Method:** 3015 **Prep Date:** 06/18/2013 08:31
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/25/2013 09:20
Workgroup #: WG434808 **Analyst:** JYH **Run Date:** 06/25/2013 09:58
Collect Date: 06/07/2013 10:00 **Dilution:** 1 **File ID:** NI.062513.095844
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0436		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000319	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00117	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0305		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00314		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00172		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

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J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L13060636-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW14MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434308	**Analyst:**	ADC	**Run Date:**	06/17/2013 16:47
Collect Date:	06/07/2013 10:20	**Dilution:**	1	**File ID:**	6M117554
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	10.5		10.0	2.50
Benzene	71-43-2	18.8		1.00	0.125
Bromobenzene	108-86-1	20.3		1.00	0.125
Bromochloromethane	74-97-5	21.2		1.00	0.200
Bromodichloromethane	75-27-4	20.0		1.00	0.250
Bromoform	75-25-2	20.3		1.00	0.500
Bromomethane	74-83-9	15.8		1.00	0.500
2-Butanone	78-93-3	11.2		10.0	2.50
n-Butylbenzene	104-51-8	21.2		1.00	0.250
sec-Butylbenzene	135-98-8	19.0		1.00	0.250
tert-Butylbenzene	98-06-6	19.4		1.00	0.250
Carbon disulfide	75-15-0	17.7		1.00	0.500
Carbon tetrachloride	56-23-5	23.4		1.00	0.250
Chlorobenzene	108-90-7	17.9		1.00	0.125
Chlorodibromomethane	124-48-1	18.7		1.00	0.250
Chloroethane	75-00-3	18.1		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.7		1.00	0.125
Chloromethane	74-87-3	19.4		1.00	0.500
2-Chlorotoluene	95-49-8	18.4		1.00	0.125
4-Chlorotoluene	106-43-4	17.4		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	16.3		5.00	1.00
1,2-Dibromoethane	106-93-4	19.1		1.00	0.250
Dibromomethane	74-95-3	19.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.5		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.5		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.6		1.00	0.125
Dichlorodifluoromethane	75-71-8	30.3		1.00	0.250
1,1-Dichloroethane	75-34-3	21.1		1.00	0.125
1,2-Dichloroethane	107-06-2	20.7		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethene	75-35-4	49.9		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	31.0		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	20.9		1.00	0.250
1,2-Dichloropropane	78-87-5	17.0		1.00	0.200
1,3-Dichloropropane	142-28-9	17.6		1.00	0.200
2,2-Dichloropropane	594-20-7	21.3		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.2		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	17.7		1.00	0.500
1,1-Dichloropropene	563-58-6	19.9		1.00	0.250
Ethylbenzene	100-41-4	19.7		1.00	0.250
2-Hexanone	591-78-6	10.7		10.0	2.50
Hexachlorobutadiene	87-68-3	26.0		1.00	0.250
Isopropylbenzene	98-82-8	19.6		1.00	0.250
p-Isopropyltoluene	99-87-6	20.2		1.00	0.250
4-Methyl-2-pentanone	108-10-1	13.2		10.0	2.50
Methylene chloride	75-09-2	19.2		5.00	0.250
Naphthalene	91-20-3	18.1		1.00	0.200
n-Propylbenzene	103-65-1	17.8		1.00	0.125
Styrene	100-42-5	19.0		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.5		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	15.9		1.00	0.200
Tetrachloroethene	127-18-4	39.3		1.00	0.250
Toluene	108-88-3	18.8		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.3		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	21.6		1.00	0.200
1,1,1-Trichloroethane	71-55-6	22.7		1.00	0.250
1,1,2-Trichloroethane	79-00-5	18.6		1.00	0.250
Trichloroethene	79-01-6	92.2		1.00	0.250
Trichlorofluoromethane	75-69-4	24.2		1.00	0.250
1,2,3-Trichloropropane	96-18-4	18.2		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.2		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	21.2		1.00	0.250
Vinyl acetate	108-05-4	14.6		10.0	2.50
Vinyl chloride	75-01-4	24.8		1.00	0.250
o-Xylene	95-47-6	18.3		1.00	0.250
m-,p-Xylene	179601-23-1	38.4		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	97.8	80	120	

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Toluene-d8	96.4	88	110	
4-Bromofluorobenzene	101	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-05 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW14MS **Prep Method:** 3015 **Prep Date:** 06/18/2013 09:48
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/22/2013 08:31
Workgroup #: WG434983 **Analyst:** KHR **Run Date:** 06/22/2013 09:01
Collect Date: 06/07/2013 10:20 **Dilution:** 1 **File ID:** P2.062213.090156
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.53		0.200	0.100
Calcium, Total	7440-70-2	20.3		0.500	0.250
Iron, Total	7439-89-6	3.17		0.100	0.0500
Magnesium, Total	7439-95-4	13.6		0.500	0.250
Potassium, Total	7440-09-7	31.0		1.00	0.500
Sodium, Total	7440-23-5	118		0.500	0.250
Strontium, Total	7440-24-6	1.12		0.0500	0.0250

Sample #: L13060636-05 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW14MS **Prep Method:** 3015 **Prep Date:** 06/18/2013 08:31
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/25/2013 09:20
Workgroup #: WG434808 **Analyst:** JYH **Run Date:** 06/25/2013 10:02
Collect Date: 06/07/2013 10:20 **Dilution:** 1 **File ID:** NI.062513.100230
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0635		0.00100	0.000500
Barium, Total	7440-39-3	0.106		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0651		0.000600	0.000300
Chromium, Total	7440-47-3	0.0649		0.00200	0.00100
Copper, Total	7440-50-8	0.0640		0.00200	0.00100
Lead, Total	7439-92-1	0.0658		0.00100	0.000500
Manganese, Total	7439-96-5	0.0979		0.00200	0.00100
Nickel, Total	7440-02-0	0.0655		0.00400	0.00200
Selenium, Total	7782-49-2	0.0714		0.00100	0.000500
Thallium, Total	7440-28-0	0.0639		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0659		0.00100	0.000500
Zinc, Total	7440-66-6	0.0667		0.0250	0.0125

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-06	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW14MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434308	**Analyst:**	ADC	**Run Date:**	06/17/2013 17:18
Collect Date:	06/07/2013 10:30	**Dilution:**	1	**File ID:**	6M117555
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	10.6		10.0	2.50
Benzene	71-43-2	18.9		1.00	0.125
Bromobenzene	108-86-1	20.4		1.00	0.125
Bromochloromethane	74-97-5	21.3		1.00	0.200
Bromodichloromethane	75-27-4	20.2		1.00	0.250
Bromoform	75-25-2	20.3		1.00	0.500
Bromomethane	74-83-9	16.6		1.00	0.500
2-Butanone	78-93-3	10.9		10.0	2.50
n-Butylbenzene	104-51-8	20.9		1.00	0.250
sec-Butylbenzene	135-98-8	18.8		1.00	0.250
tert-Butylbenzene	98-06-6	19.4		1.00	0.250
Carbon disulfide	75-15-0	17.2		1.00	0.500
Carbon tetrachloride	56-23-5	22.5		1.00	0.250
Chlorobenzene	108-90-7	18.3		1.00	0.125
Chlorodibromomethane	124-48-1	19.3		1.00	0.250
Chloroethane	75-00-3	18.1		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.6		1.00	0.125
Chloromethane	74-87-3	19.4		1.00	0.500
2-Chlorotoluene	95-49-8	18.8		1.00	0.125
4-Chlorotoluene	106-43-4	17.0		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	15.8		5.00	1.00
1,2-Dibromoethane	106-93-4	19.0		1.00	0.250
Dibromomethane	74-95-3	20.0		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.7		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.7		1.00	0.250
1,4-Dichlorobenzene	106-46-7	20.1		1.00	0.125
Dichlorodifluoromethane	75-71-8	27.0		1.00	0.250
1,1-Dichloroethane	75-34-3	21.4		1.00	0.125
1,2-Dichloroethane	107-06-2	20.5		1.00	0.250
1,1-Dichloroethene	75-35-4	45.3		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	30.8		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	20.7		1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	17.0		1.00	0.200
1,3-Dichloropropane	142-28-9	18.1		1.00	0.200
2,2-Dichloropropane	594-20-7	20.8		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.3		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	17.9		1.00	0.500
1,1-Dichloropropene	563-58-6	19.1		1.00	0.250
Ethylbenzene	100-41-4	20.1		1.00	0.250
2-Hexanone	591-78-6	11.0		10.0	2.50
Hexachlorobutadiene	87-68-3	25.8		1.00	0.250
Isopropylbenzene	98-82-8	19.6		1.00	0.250
p-Isopropyltoluene	99-87-6	20.1		1.00	0.250
4-Methyl-2-pentanone	108-10-1	13.6		10.0	2.50
Methylene chloride	75-09-2	19.4		5.00	0.250
Naphthalene	91-20-3	18.6		1.00	0.200
n-Propylbenzene	103-65-1	17.8		1.00	0.125
Styrene	100-42-5	19.4		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.8		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	15.9		1.00	0.200
Tetrachloroethene	127-18-4	38.0		1.00	0.250
Toluene	108-88-3	19.0		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.5		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	21.9		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.8		1.00	0.250
1,1,2-Trichloroethane	79-00-5	18.5		1.00	0.250
Trichloroethene	79-01-6	89.3		1.00	0.250
Trichlorofluoromethane	75-69-4	22.2		1.00	0.250
1,2,3-Trichloropropane	96-18-4	18.1		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.3		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	21.3		1.00	0.250
Vinyl acetate	108-05-4	14.8		10.0	2.50
Vinyl chloride	75-01-4	23.7		1.00	0.250
o-Xylene	95-47-6	18.6		1.00	0.250
m-,p-Xylene	179601-23-1	39.2		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	95.8	80	120	
Toluene-d8	97.1	88	110	
4-Bromofluorobenzene	101	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-06	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	35BWW14MSD	**Prep Method:**	3015	**Prep Date:**	06/18/2013 09:48
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/22/2013 08:31
Workgroup #:	WG434983	**Analyst:**	KHR	**Run Date:**	06/22/2013 09:04
Collect Date:	06/07/2013 10:30	**Dilution:**	1	**File ID:**	P2.062213.090401
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.56		0.200	0.100
Calcium, Total	7440-70-2	20.6		0.500	0.250
Iron, Total	7439-89-6	3.18		0.100	0.0500
Magnesium, Total	7439-95-4	13.6		0.500	0.250
Potassium, Total	7440-09-7	30.7		1.00	0.500
Sodium, Total	7440-23-5	120		0.500	0.250
Strontium, Total	7440-24-6	1.11		0.0500	0.0250

Sample #:	L13060636-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14MSD	**Prep Method:**	3015	**Prep Date:**	06/18/2013 08:31
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/25/2013 09:20
Workgroup #:	WG434808	**Analyst:**	JYH	**Run Date:**	06/25/2013 10:06
Collect Date:	06/07/2013 10:30	**Dilution:**	1	**File ID:**	NI.062513.100617
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0635		0.00100	0.000500
Barium, Total	7440-39-3	0.108		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0658		0.000600	0.000300
Chromium, Total	7440-47-3	0.0634		0.00200	0.00100
Copper, Total	7440-50-8	0.0640		0.00200	0.00100
Lead, Total	7439-92-1	0.0670		0.00100	0.000500
Manganese, Total	7439-96-5	0.0966		0.00200	0.00100
Nickel, Total	7440-02-0	0.0653		0.00400	0.00200
Selenium, Total	7782-49-2	0.0682		0.00100	0.000500
Thallium, Total	7440-28-0	0.0647		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0658		0.00100	0.000500
Zinc, Total	7440-66-6	0.0669		0.0250	0.0125

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-07	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW 4-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434308	**Analyst:**	ADC	**Run Date:**	06/17/2013 21:57
Collect Date:	06/07/2013 12:10	**Dilution:**	1	**File ID:**	6M117564
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.131	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.875	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.526	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	24.2		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.32		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	98.2	80	120	
Toluene-d8	96.4	88	110	
4-Bromofluorobenzene	101	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-07 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW 4-1 **Prep Method:** 3015 **Prep Date:** 06/17/2013 13:44
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/22/2013 08:31
Workgroup #: WG435022 **Analyst:** KHR **Run Date:** 06/22/2013 14:40
Collect Date: 06/07/2013 12:10 **Dilution:** 1 **File ID:** P2.062213.144013
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.170	J	0.200	0.100
Calcium, Total	7440-70-2	22.7		0.500	0.250
Iron, Total	7439-89-6	0.377		0.100	0.0500
Magnesium, Total	7439-95-4	10.8		0.500	0.250
Potassium, Total	7440-09-7	2.17		1.00	0.500
Sodium, Total	7440-23-5	138		0.500	0.250
Strontium, Total	7440-24-6	0.717		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13060636-07 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-1 **Prep Method:** 3015 **Prep Date:** 06/18/2013 08:31
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/25/2013 09:20
Workgroup #: WG434808 **Analyst:** JYH **Run Date:** 06/25/2013 10:36
Collect Date: 06/07/2013 12:10 **Dilution:** 1 **File ID:** NI.062513.103631
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0363		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000738		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.224		0.00200	0.00100
Nickel, Total	7440-02-0	0.00450		0.00400	0.00200
Selenium, Total	7782-49-2	0.00169		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00119		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW 4-1 D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434308	**Analyst:**	ADC	**Run Date:**	06/17/2013 22:29
Collect Date:	06/07/2013 12:20	**Dilution:**	1	**File ID:**	6M117565
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.202	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.802	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.489	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	24.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.37		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	98.3	80	120	
Toluene-d8	96.2	88	110	
4-Bromofluorobenzene	100	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-08 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW 4-1 D **Prep Method:** 3015 **Prep Date:** 06/18/2013 09:48
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/22/2013 08:31
Workgroup #: WG434983 **Analyst:** KHR **Run Date:** 06/22/2013 09:25
Collect Date: 06/07/2013 12:20 **Dilution:** 1 **File ID:** P2.062213.092505
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.254		0.200	0.100
Calcium, Total	7440-70-2	21.2		0.500	0.250
Iron, Total	7439-89-6	0.403		0.100	0.0500
Magnesium, Total	7439-95-4	9.40		0.500	0.250
Potassium, Total	7440-09-7	1.95		1.00	0.500
Sodium, Total	7440-23-5	131		0.500	0.250
Strontium, Total	7440-24-6	0.601		0.0500	0.0250

Sample #: L13060636-08 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-1 D **Prep Method:** 3015 **Prep Date:** 06/18/2013 08:31
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/25/2013 09:20
Workgroup #: WG434808 **Analyst:** JYH **Run Date:** 06/25/2013 10:40
Collect Date: 06/07/2013 12:20 **Dilution:** 1 **File ID:** NI.062513.104017
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0368		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000881		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.221		0.00200	0.00100
Nickel, Total	7440-02-0	0.00390	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00147		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00140		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW 4-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434308	**Analyst:**	ADC	**Run Date:**	06/17/2013 23:00
Collect Date:	06/07/2013 15:00	**Dilution:**	1	**File ID:**	6M117566
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.246	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.80		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.432	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	8.25		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.53		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	97.8	80	120	
Toluene-d8	97.0	88	110	
4-Bromofluorobenzene	98.3	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-09 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW 4-2 **Prep Method:** 3015 **Prep Date:** 06/18/2013 09:48
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/22/2013 08:31
Workgroup #: WG434983 **Analyst:** KHR **Run Date:** 06/22/2013 09:28
Collect Date: 06/07/2013 15:00 **Dilution:** 1 **File ID:** P2.062213.092806
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	9.47		0.500	0.250
Iron, Total	7439-89-6	0.0731	J	0.100	0.0500
Magnesium, Total	7439-95-4	5.40		0.500	0.250
Potassium, Total	7440-09-7	1.01		1.00	0.500
Sodium, Total	7440-23-5	88.4		0.500	0.250
Strontium, Total	7440-24-6	0.305		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-09 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-2 **Prep Method:** 3015 **Prep Date:** 06/18/2013 08:31
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/25/2013 09:20
Workgroup #: WG434808 **Analyst:** JYH **Run Date:** 06/25/2013 10:44
Collect Date: 06/07/2013 15:00 **Dilution:** 1 **File ID:** NI.062513.104404
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0417		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000344	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0421		0.00200	0.00100
Nickel, Total	7440-02-0	0.00232	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00164		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00228		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-10
Client ID: FIELD BLANK 7 JUNE 2013
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/07/2013 15:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/17/2013 18:51
File ID: 6M117558

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	4.63	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.905	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2	0.668	J	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	95.5	80	120	
Toluene-d8	97.1	88	110	

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

4-Bromofluorobenzene	99.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-10
Client ID: FIELD BLANK 7 JUNE 2013
Matrix: Water
Workgroup #: WG434983
Collect Date: 06/07/2013 15:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/18/2013 09:48
Cal Date: 06/22/2013 08:31
Run Date: 06/22/2013 09:31
File ID: P2.062213.093110

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5	0.341	J	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-10
Client ID: FIELD BLANK 7 JUNE 2013
Matrix: Water
Workgroup #: WG434808
Collect Date: 06/07/2013 15:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/18/2013 08:31
Cal Date: 06/25/2013 09:20
Run Date: 06/25/2013 10:47
File ID: NI.062513.104750

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00129	J	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-11
Client ID: MW 4-3
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/07/2013 16:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/17/2013 23:31
File ID: 6M117567

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	2.55	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethane	75-34-3	0.304	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.64		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.353	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	5.87		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.97		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q

Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	97.5	80	120	
Toluene-d8	95.6	88	110	
4-Bromofluorobenzene	99.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-11 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW 4-3 **Prep Method:** 3015 **Prep Date:** 06/18/2013 09:48
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/22/2013 08:31
Workgroup #: WG434983 **Analyst:** KHR **Run Date:** 06/22/2013 09:34
Collect Date: 06/07/2013 16:10 **Dilution:** 1 **File ID:** P2.062213.093410
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.17		0.200	0.100
Calcium, Total	7440-70-2	3.67		0.500	0.250
Iron, Total	7439-89-6	1.03		0.100	0.0500
Magnesium, Total	7439-95-4	1.59		0.500	0.250
Potassium, Total	7440-09-7	0.847	J	1.00	0.500
Sodium, Total	7440-23-5	74.9		0.500	0.250
Strontium, Total	7440-24-6	0.0767		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13060636-11 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-3 **Prep Method:** 3015 **Prep Date:** 06/18/2013 08:31
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/25/2013 09:20
Workgroup #: WG434808 **Analyst:** JYH **Run Date:** 06/25/2013 10:51
Collect Date: 06/07/2013 16:10 **Dilution:** 1 **File ID:** NI.062513.105136
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0675		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00354		0.000600	0.000300
Chromium, Total	7440-47-3	0.00139	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0141		0.00200	0.00100
Nickel, Total	7440-02-0	0.00331	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0120		0.00100	0.000500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00269		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-12
Client ID: TRIP BLANK 7 JUNE 2013
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/07/2013 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/17/2013 19:21
File ID: 6M117559

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	95.3	80	120	
Toluene-d8	97.4	88	110	
4-Bromofluorobenzene	102	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-13
Client ID: MW 1-2
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/10/2013 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 00:34
File ID: 6M117569

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	9.13		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	97.4	80	120	
Toluene-d8	96.3	88	110	
4-Bromofluorobenzene	98.6	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-13
Client ID: MW 1-2
Matrix: Water
Workgroup #: WG434983
Collect Date: 06/10/2013 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/18/2013 09:48
Cal Date: 06/22/2013 08:31
Run Date: 06/22/2013 09:37
File ID: P2.062213.093711

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	15.3		0.500	0.250
Iron, Total	7439-89-6	0.0559	J	0.100	0.0500
Magnesium, Total	7439-95-4	6.80		0.500	0.250
Potassium, Total	7440-09-7	1.38		1.00	0.500
Sodium, Total	7440-23-5	108		0.500	0.250
Strontium, Total	7440-24-6	0.694		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-13
Client ID: MW 1-2
Matrix: Water
Workgroup #: WG434808
Collect Date: 06/10/2013 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/18/2013 08:31
Cal Date: 06/25/2013 09:20
Run Date: 06/25/2013 10:55
File ID: NI.062513.105523

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0724		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00156		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0407		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0378		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00112		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-14
Client ID: TRIP BLANK 7 JUNE 2013
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/10/2013 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/17/2013 19:52
File ID: 6M117560

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	96.2	80	120	
Toluene-d8	97.0	88	110	
4-Bromofluorobenzene	102	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-15
Client ID: FIELD BLANK 10 JUNE 2013
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/10/2013 08:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/17/2013 20:23
File ID: 6M117561

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	1.26		1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	97.8	80	120	
Toluene-d8	96.3	88	110	
4-Bromofluorobenzene	99.0	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-15
Client ID: FIELD BLANK 10 JUNE 2013
Matrix: Water
Workgroup #: WG435260
Collect Date: 06/10/2013 08:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/23/2013 09:17
Cal Date: 07/01/2013 08:36
Run Date: 07/01/2013 12:01
File ID: P2.070113.120131

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5	0.310	J	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-15
Client ID: FIELD BLANK 10 JUNE 2013
Matrix: Water
Workgroup #: WG434808
Collect Date: 06/10/2013 08:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/18/2013 08:31
Cal Date: 06/25/2013 09:20
Run Date: 06/25/2013 10:59
File ID: NI.062513.105910

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00117	J	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-16
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG434430
Collect Date: 06/10/2013 10:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 15:08
File ID: 6M117592

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	2.84		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.35		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	93.7	80	120	
Toluene-d8	96.1	88	110	
4-Bromofluorobenzene	98.4	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-16
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG435260
Collect Date: 06/10/2013 10:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/23/2013 09:17
Cal Date: 06/24/2013 08:55
Run Date: 06/24/2013 14:46
File ID: P2.062413.144604

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.504		0.200	0.100
Calcium, Total	7440-70-2	6.02		0.500	0.250
Iron, Total	7439-89-6	0.378		0.100	0.0500
Magnesium, Total	7439-95-4	2.42		0.500	0.250
Potassium, Total	7440-09-7	1.05		1.00	0.500
Sodium, Total	7440-23-5	31.1		0.500	0.250
Strontium, Total	7440-24-6	0.179		0.0500	0.0250

Sample #: L13060636-16
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG434808
Collect Date: 06/10/2013 10:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/18/2013 08:31
Cal Date: 06/25/2013 09:20
Run Date: 06/25/2013 11:02
File ID: NI.062513.110256

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0582		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000926		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0572		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00170		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00110		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND — Not detected at or above the reporting limit (RL).

Sample #: L13060636-17
Client ID: MW 2-1 MS
Matrix: Water
Workgroup #: WG434430
Collect Date: 06/10/2013 10:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 12:32
File ID: 6M117587

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	10.4		10.0	2.50
Benzene	71-43-2	19.2		1.00	0.125
Bromobenzene	108-86-1	20.6		1.00	0.125
Bromochloromethane	74-97-5	21.8		1.00	0.200
Bromodichloromethane	75-27-4	19.8		1.00	0.250
Bromoform	75-25-2	19.9		1.00	0.500
Bromomethane	74-83-9	19.2		1.00	0.500
2-Butanone	78-93-3	11.0		10.0	2.50
n-Butylbenzene	104-51-8	20.8		1.00	0.250
sec-Butylbenzene	135-98-8	18.9		1.00	0.250
tert-Butylbenzene	98-06-6	19.8		1.00	0.250
Carbon disulfide	75-15-0	18.2		1.00	0.500
Carbon tetrachloride	56-23-5	21.7		1.00	0.250
Chlorobenzene	108-90-7	18.6		1.00	0.125
Chlorodibromomethane	124-48-1	18.8		1.00	0.250
Chloroethane	75-00-3	18.7		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.3		1.00	0.125

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Chloromethane	74-87-3	19.8		1.00	0.500
2-Chlorotoluene	95-49-8	17.6		1.00	0.125
4-Chlorotoluene	106-43-4	18.2		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	16.1		5.00	1.00
1,2-Dibromoethane	106-93-4	19.4		1.00	0.250
Dibromomethane	74-95-3	19.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.7		1.00	0.125
1,3-Dichlorobenzene	541-73-1	19.0		1.00	0.250
1,4-Dichlorobenzene	106-46-7	20.3		1.00	0.125
Dichlorodifluoromethane	75-71-8	26.0		1.00	0.250
1,1-Dichloroethane	75-34-3	18.0		1.00	0.125
1,2-Dichloroethane	107-06-2	19.6		1.00	0.250
1,1-Dichloroethene	75-35-4	17.8		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	21.3		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	21.3		1.00	0.250
1,2-Dichloropropane	78-87-5	17.2		1.00	0.200
1,3-Dichloropropane	142-28-9	18.2		1.00	0.200
2,2-Dichloropropane	594-20-7	20.3		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.4		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	17.5		1.00	0.500
1,1-Dichloropropene	563-58-6	19.4		1.00	0.250
Ethylbenzene	100-41-4	20.1		1.00	0.250
2-Hexanone	591-78-6	10.9		10.0	2.50
Hexachlorobutadiene	87-68-3	25.1		1.00	0.250
Isopropylbenzene	98-82-8	19.7		1.00	0.250
p-Isopropyltoluene	99-87-6	20.1		1.00	0.250
4-Methyl-2-pentanone	108-10-1	13.6		10.0	2.50
Methylene chloride	75-09-2	20.0		5.00	0.250
Naphthalene	91-20-3	18.4		1.00	0.200
n-Propylbenzene	103-65-1	17.8		1.00	0.125
Styrene	100-42-5	19.6		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.8		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	16.4		1.00	0.200
Tetrachloroethene	127-18-4	24.3		1.00	0.250
Toluene	108-88-3	19.4		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.3		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	21.8		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.4		1.00	0.250
1,1,2-Trichloroethane	79-00-5	19.0		1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Trichloroethene	79-01-6	26.2		1.00	0.250
Trichlorofluoromethane	75-69-4	21.5		1.00	0.250
1,2,3-Trichloropropane	96-18-4	17.9		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.2		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	21.3		1.00	0.250
Vinyl acetate	108-05-4	14.9		10.0	2.50
Vinyl chloride	75-01-4	22.0		1.00	0.250
o-Xylene	95-47-6	18.9		1.00	0.250
m-,p-Xylene	179601-23-1	39.7		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	89.9	80	120	
Toluene-d8	97.1	88	110	
4-Bromofluorobenzene	99.2	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-17
Client ID: MW 2-1 MS
Matrix: Water
Workgroup #: WG435260
Collect Date: 06/10/2013 10:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/23/2013 09:17
Cal Date: 06/24/2013 08:55
Run Date: 06/24/2013 14:49
File ID: P2.062413.144905

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.15		0.200	0.100
Calcium, Total	7440-70-2	12.1		0.500	0.250
Iron, Total	7439-89-6	2.63		0.100	0.0500
Magnesium, Total	7439-95-4	8.23		0.500	0.250
Potassium, Total	7440-09-7	31.0		1.00	0.500
Sodium, Total	7440-23-5	61.9		0.500	0.250
Strontium, Total	7440-24-6	0.789		0.0500	0.0250

Sample #: L13060636-17
Client ID: MW 2-1 MS
Matrix: Water
Workgroup #: WG434808
Collect Date: 06/10/2013 10:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/18/2013 08:31
Cal Date: 06/25/2013 09:20
Run Date: 06/25/2013 11:06
File ID: NI.062513.110642

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0596		0.00100	0.000500
Barium, Total	7440-39-3	0.116		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0631		0.000600	0.000300
Chromium, Total	7440-47-3	0.0610		0.00200	0.00100
Copper, Total	7440-50-8	0.0631		0.00200	0.00100
Lead, Total	7439-92-1	0.0649		0.00100	0.000500
Manganese, Total	7439-96-5	0.121		0.00200	0.00100
Nickel, Total	7440-02-0	0.0636		0.00400	0.00200
Selenium, Total	7782-49-2	0.0657		0.00100	0.000500
Thallium, Total	7440-28-0	0.0609		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0625		0.00100	0.000500
Zinc, Total	7440-66-6	0.0677		0.0250	0.0125

Sample #: L13060636-18
Client ID: MW 2-1 MSD
Matrix: Water
Workgroup #: WG434430
Collect Date: 06/10/2013 10:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 13:03
File ID: 6M117588

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	10.3		10.0	2.50
Benzene	71-43-2	18.5		1.00	0.125
Bromobenzene	108-86-1	20.1		1.00	0.125
Bromochloromethane	74-97-5	21.5		1.00	0.200
Bromodichloromethane	75-27-4	19.3		1.00	0.250
Bromoform	75-25-2	19.7		1.00	0.500
Bromomethane	74-83-9	18.8		1.00	0.500
2-Butanone	78-93-3	11.8		10.0	2.50
n-Butylbenzene	104-51-8	19.5		1.00	0.250
sec-Butylbenzene	135-98-8	17.8		1.00	0.250
tert-Butylbenzene	98-06-6	18.6		1.00	0.250
Carbon disulfide	75-15-0	17.5		1.00	0.500
Carbon tetrachloride	56-23-5	20.3		1.00	0.250
Chlorobenzene	108-90-7	17.9		1.00	0.125
Chlorodibromomethane	124-48-1	18.6		1.00	0.250
Chloroethane	75-00-3	17.9		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	19.9		1.00	0.125
Chloromethane	74-87-3	19.1		1.00	0.500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Chlorotoluene	95-49-8	17.3		1.00	0.125
4-Chlorotoluene	106-43-4	16.6		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	15.2		5.00	1.00
1,2-Dibromoethane	106-93-4	19.4		1.00	0.250
Dibromomethane	74-95-3	20.0		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.1		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.1		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.3		1.00	0.125
Dichlorodifluoromethane	75-71-8	24.3		1.00	0.250
1,1-Dichloroethane	75-34-3	17.4		1.00	0.125
1,2-Dichloroethane	107-06-2	19.1		1.00	0.250
1,1-Dichloroethene	75-35-4	16.5		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.8		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	20.5		1.00	0.250
1,2-Dichloropropane	78-87-5	16.8		1.00	0.200
1,3-Dichloropropane	142-28-9	17.9		1.00	0.200
2,2-Dichloropropane	594-20-7	19.1		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.0		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	17.4		1.00	0.500
1,1-Dichloropropene	563-58-6	18.3		1.00	0.250
Ethylbenzene	100-41-4	19.4		1.00	0.250
2-Hexanone	591-78-6	11.1		10.0	2.50
Hexachlorobutadiene	87-68-3	23.9		1.00	0.250
Isopropylbenzene	98-82-8	18.6		1.00	0.250
p-Isopropyltoluene	99-87-6	18.9		1.00	0.250
4-Methyl-2-pentanone	108-10-1	13.7		10.0	2.50
Methylene chloride	75-09-2	19.7		5.00	0.250
Naphthalene	91-20-3	16.0		1.00	0.200
n-Propylbenzene	103-65-1	16.7		1.00	0.125
Styrene	100-42-5	19.2		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.2		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	16.0		1.00	0.200
Tetrachloroethene	127-18-4	23.2		1.00	0.250
Toluene	108-88-3	18.6		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	20.4		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	20.7		1.00	0.200
1,1,1-Trichloroethane	71-55-6	20.3		1.00	0.250
1,1,2-Trichloroethane	79-00-5	19.1		1.00	0.250
Trichloroethene	79-01-6	25.1		1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Trichlorofluoromethane	75-69-4	20.4		1.00	0.250
1,2,3-Trichloropropane	96-18-4	17.9		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.4		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	20.1		1.00	0.250
Vinyl acetate	108-05-4	14.7		10.0	2.50
Vinyl chloride	75-01-4	20.7		1.00	0.250
o-Xylene	95-47-6	18.2		1.00	0.250
m-,p-Xylene	179601-23-1	37.9		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	86	118	
1,2-Dichloroethane-d4	91.7	80	120	
Toluene-d8	96.8	88	110	
4-Bromofluorobenzene	96.8	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-18
Client ID: MW 2-1 MSD
Matrix: Water
Workgroup #: WG435260
Collect Date: 06/10/2013 10:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/23/2013 09:17
Cal Date: 06/24/2013 08:55
Run Date: 06/24/2013 14:51
File ID: P2.062413.145109

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.34		0.200	0.100
Calcium, Total	7440-70-2	12.4		0.500	0.250
Iron, Total	7439-89-6	2.77		0.100	0.0500
Magnesium, Total	7439-95-4	8.77		0.500	0.250
Potassium, Total	7440-09-7	32.8		1.00	0.500
Sodium, Total	7440-23-5	64.1		0.500	0.250
Strontium, Total	7440-24-6	0.808		0.0500	0.0250

Sample #: L13060636-18
Client ID: MW 2-1 MSD
Matrix: Water
Workgroup #: WG434808
Collect Date: 06/10/2013 10:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/18/2013 08:31
Cal Date: 06/25/2013 09:20
Run Date: 06/25/2013 11:10
File ID: NI.062513.111029

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0616		0.00100	0.000500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.116		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0637		0.000600	0.000300
Chromium, Total	7440-47-3	0.0618		0.00200	0.00100
Copper, Total	7440-50-8	0.0626		0.00200	0.00100
Lead, Total	7439-92-1	0.0659		0.00100	0.000500
Manganese, Total	7439-96-5	0.122		0.00200	0.00100
Nickel, Total	7440-02-0	0.0631		0.00400	0.00200
Selenium, Total	7782-49-2	0.0663		0.00100	0.000500
Thallium, Total	7440-28-0	0.0624		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0627		0.00100	0.000500
Zinc, Total	7440-66-6	0.0682		0.0250	0.0125

Sample #: L13060636-19
Client ID: MW 2-2
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/10/2013 11:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 01:05
File ID: 6M117570

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.320	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	99.0	80	120	
Toluene-d8	96.2	88	110	
4-Bromofluorobenzene	99.8	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-19
Client ID: MW 2-2
Matrix: Water
Workgroup #: WG435260
Collect Date: 06/10/2013 11:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/23/2013 09:17
Cal Date: 07/01/2013 08:36
Run Date: 07/01/2013 12:09
File ID: P2.070113.120934

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.96		0.200	0.100
Calcium, Total	7440-70-2	2.99		0.500	0.250
Iron, Total	7439-89-6	7.63		0.100	0.0500
Magnesium, Total	7439-95-4	1.65		0.500	0.250
Potassium, Total	7440-09-7	1.21		1.00	0.500
Sodium, Total	7440-23-5	27.9		0.500	0.250
Strontium, Total	7440-24-6	0.0990		0.0500	0.0250

Sample #: L13060636-19
Client ID: MW 2-2
Matrix: Water
Workgroup #: WG434808
Collect Date: 06/10/2013 11:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/18/2013 08:31
Cal Date: 06/25/2013 09:20
Run Date: 06/25/2013 11:21
File ID: NI.062513.112153

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.107		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000719		0.000600	0.000300
Chromium, Total	7440-47-3	0.00588		0.00200	0.00100
Copper, Total	7440-50-8	0.00491		0.00200	0.00100
Lead, Total	7439-92-1	0.00451		0.00100	0.000500
Manganese, Total	7439-96-5	0.0440		0.00200	0.00100
Nickel, Total	7440-02-0	0.00964		0.00400	0.00200
Selenium, Total	7782-49-2	0.00349		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0119		0.00100	0.000500
Zinc, Total	7440-66-6	0.0557		0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-20
Client ID: MW 2-3
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/10/2013 13:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 01:36
File ID: 6M117571

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.840	J	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	99.0	80	120	
Toluene-d8	95.4	88	110	
4-Bromofluorobenzene	97.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-20
Client ID: MW 2-3
Matrix: Water
Workgroup #: WG435260
Collect Date: 06/10/2013 13:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/23/2013 09:17
Cal Date: 07/01/2013 08:36
Run Date: 07/01/2013 12:12
File ID: P2.070113.121234

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.605		0.200	0.100
Calcium, Total	7440-70-2	1.24		0.500	0.250
Iron, Total	7439-89-6	1.29		0.100	0.0500
Magnesium, Total	7439-95-4	0.756		0.500	0.250
Potassium, Total	7440-09-7	0.789	J	1.00	0.500
Sodium, Total	7440-23-5	26.7		0.500	0.250
Strontium, Total	7440-24-6	0.0370	J	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13060636-20
Client ID: MW 2-3
Matrix: Water
Workgroup #: WG434443
Collect Date: 06/10/2013 13:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/17/2013 10:20
Cal Date: 06/19/2013 08:04
Run Date: 06/19/2013 15:22
File ID: NI.061913.152214

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0586		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000850		0.000600	0.000300
Chromium, Total	7440-47-3	0.00156	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00185	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000678	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0244		0.00200	0.00100
Nickel, Total	7440-02-0	0.00259	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00186		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00288		0.00100	0.000500
Zinc, Total	7440-66-6	0.0417		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-21
Client ID: MW 3-1
Matrix: Water
Workgroup #: WG434308
Collect Date: 06/10/2013 15:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 02:08
File ID: 6M117572

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	18.7		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.02		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	98.5	80	120	
Toluene-d8	95.9	88	110	
4-Bromofluorobenzene	97.3	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-21
Client ID: MW 3-1
Matrix: Water
Workgroup #: WG435260
Collect Date: 06/10/2013 15:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/23/2013 09:17
Cal Date: 07/01/2013 08:36
Run Date: 07/01/2013 12:15
File ID: P2.070113.121538

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.145	J	0.200	0.100
Calcium, Total	7440-70-2	17.9		0.500	0.250
Iron, Total	7439-89-6	0.119		0.100	0.0500
Magnesium, Total	7439-95-4	4.33		0.500	0.250
Potassium, Total	7440-09-7	10.5		1.00	0.500
Sodium, Total	7440-23-5	87.5		0.500	0.250
Strontium, Total	7440-24-6	2.42		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 3-1	**Prep Method:**	3015	**Prep Date:**	06/17/2013 10:20
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/19/2013 08:04
Workgroup #:	WG434443	**Analyst:**	JYH	**Run Date:**	06/19/2013 15:26
Collect Date:	06/10/2013 15:15	**Dilution:**	1	**File ID:**	NI.061913.152600
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.108		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000885		0.000600	0.000300
Chromium, Total	7440-47-3	0.00206		0.00200	0.00100
Copper, Total	7440-50-8	0.00104	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0162		0.00200	0.00100
Nickel, Total	7440-02-0	0.00512		0.00400	0.00200
Selenium, Total	7782-49-2	0.00160		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0155		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L13060636-22	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW 3-1 D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434430	**Analyst:**	ADC	**Run Date:**	06/18/2013 15:39
Collect Date:	06/10/2013 15:30	**Dilution:**	1	**File ID:**	6M117593
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Lab Report #: L13060636
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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	20.1		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.23		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	94.3	80	120	
Toluene-d8	96.0	88	110	
4-Bromofluorobenzene	98.1	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-22
Client ID: MW 3-1 D
Matrix: Water
Workgroup #: WG435260
Collect Date: 06/10/2013 15:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 06/23/2013 09:17
Cal Date: 07/01/2013 08:36
Run Date: 07/01/2013 12:18
File ID: P2.070113.121843

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.150	J	0.200	0.100
Calcium, Total	7440-70-2	18.6		0.500	0.250
Iron, Total	7439-89-6	0.106		0.100	0.0500
Magnesium, Total	7439-95-4	4.84		0.500	0.250
Potassium, Total	7440-09-7	10.0		1.00	0.500
Sodium, Total	7440-23-5	87.6		0.500	0.250
Strontium, Total	7440-24-6	2.28		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #: L13060636-22 | **PrePrep Method:** N/A | **Instrument:** ICP-MS2
Client ID: MW 3-1 D | **Prep Method:** 3015 | **Prep Date:** 06/17/2013 10:20
Matrix: Water | **Analytical Method:** 6020 | **Cal Date:** 06/19/2013 08:04
Workgroup #: WG434443 | **Analyst:** JYH | **Run Date:** 06/19/2013 15:29
Collect Date: 06/10/2013 15:30 | **Dilution:** 1 | **File ID:** NI.061913.152946
Sample Tag: 01 | **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.105		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000885		0.000600	0.000300
Chromium, Total	7440-47-3	0.00142	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0192		0.00200	0.00100
Nickel, Total	7440-02-0	0.00230	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00176		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0142		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-23 | **PrePrep Method:** N/A | **Instrument:** HPMS6
Client ID: TRIP BLANK 11 JUNE 2013 | **Prep Method:** 5030B/5030C/5035A | **Prep Date:** N/A
Matrix: Water | **Analytical Method:** 8260B | **Cal Date:** 04/02/2013 13:49
Workgroup #: WG434430 | **Analyst:** ADC | **Run Date:** 06/18/2013 14:05
Collect Date: 06/11/2013 00:01 | **Dilution:** 1 | **File ID:** 6M117590
Sample Tag: 01 | **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	93.0	80	120	
Toluene-d8	96.6	88	110	
4-Bromofluorobenzene	97.7	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-24
Client ID: FIELD BLANK 11 JUNE 2013
Matrix: Water
Workgroup #: WG434430
Collect Date: 06/11/2013 08:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 14:37
File ID: 6M117591

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.731	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	93.8	80	120	
Toluene-d8	96.6	88	110	
4-Bromofluorobenzene	98.9	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-24
Client ID: FIELD BLANK 11 JUNE 2013
Matrix: Water
Workgroup #: WG434961
Collect Date: 06/11/2013 08:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 06/21/2013 11:10
Cal Date: 06/21/2013 09:15
Run Date: 06/21/2013 20:37
File ID: T2.062113.203748

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	0.382	J	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	0.309	J	0.500	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5	0.460	J	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-24
Client ID: FIELD BLANK 11 JUNE 2013
Matrix: Water
Workgroup #: WG434443
Collect Date: 06/11/2013 08:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 06/17/2013 10:20
Cal Date: 06/19/2013 08:04
Run Date: 06/19/2013 15:33
File ID: NI.061913.153331

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-25
Client ID: MW 3-2
Matrix: Water
Workgroup #: WG434430
Collect Date: 06/11/2013 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 04/02/2013 13:49
Run Date: 06/18/2013 16:10
File ID: 6M117594

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200

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Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.199	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.711	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	37.9		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.71		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	94.9	80	120	
Toluene-d8	95.2	88	110	
4-Bromofluorobenzene	98.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-25
Client ID: MW 3-2
Matrix: Water
Workgroup #: WG434961
Collect Date: 06/11/2013 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 06/21/2013 11:10
Cal Date: 06/21/2013 09:15
Run Date: 06/21/2013 20:54
File ID: T2.062113.205459

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	9.92		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	4.88		0.500	0.250
Potassium, Total	7440-09-7	1.09		1.00	0.500
Sodium, Total	7440-23-5	26.3		0.500	0.250
Strontium, Total	7440-24-6	0.291		0.0500	0.0250

ND Not detected at or above the reporting limit (RL).

Sample #: L13060636-25 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 3-2 **Prep Method:** 3015 **Prep Date:** 06/17/2013 10:20
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/19/2013 08:04
Workgroup #: WG434443 **Analyst:** JYH **Run Date:** 06/19/2013 15:37
Collect Date: 06/11/2013 09:00 **Dilution:** 1 **File ID:** NI.061913.153717
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.126		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000722		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0278		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00157		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00104		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND Not detected at or above the reporting limit (RL).

Sample #: L13060636-26 **PrePrep Method:** N/A **Instrument:** HPMS6
Client ID: MW 3-3 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 04/02/2013 13:49
Workgroup #: WG434430 **Analyst:** ADC **Run Date:** 06/18/2013 16:41
Collect Date: 06/11/2013 10:00 **Dilution:** 1 **File ID:** 6M117595
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.292	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	40.5		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	7.64		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	95.6	80	120	
Toluene-d8	96.3	88	110	
4-Bromofluorobenzene	96.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-26
Client ID: MW 3-3
Matrix: Water
Workgroup #: WG434961
Collect Date: 06/11/2013 10:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 06/21/2013 11:10
Cal Date: 06/21/2013 09:15
Run Date: 06/21/2013 20:58
File ID: T2.062113.205824

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.52		0.200	0.100
Calcium, Total	7440-70-2	5.61		0.500	0.250
Iron, Total	7439-89-6	2.53		0.100	0.0500
Magnesium, Total	7439-95-4	1.78		0.500	0.250
Potassium, Total	7440-09-7	1.74		1.00	0.500
Sodium, Total	7440-23-5	59.3		0.500	0.250
Strontium, Total	7440-24-6	0.295		0.0500	0.0250

Sample #: L13060636-26 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 3-3 **Prep Method:** 3015 **Prep Date:** 06/17/2013 10:20
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/19/2013 08:04
Workgroup #: WG434443 **Analyst:** JYH **Run Date:** 06/19/2013 15:41
Collect Date: 06/11/2013 10:00 **Dilution:** 1 **File ID:** NI.061913.154103
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.104		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00136		0.000600	0.000300
Chromium, Total	7440-47-3	0.0132		0.00200	0.00100
Copper, Total	7440-50-8	0.00248		0.00200	0.00100
Lead, Total	7439-92-1	0.00135		0.00100	0.000500
Manganese, Total	7439-96-5	0.0310		0.00200	0.00100
Nickel, Total	7440-02-0	0.00367	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00276		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00747		0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-26 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 3-3 **Prep Method:** 3015 **Prep Date:** 06/17/2013 10:20
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/20/2013 08:05
Workgroup #: WG434443 **Analyst:** JYH **Run Date:** 06/20/2013 12:31
Collect Date: 06/11/2013 10:00 **Dilution:** 5 **File ID:** NI.062013.123151
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.430		0.125	0.0625

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L13060636-27	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW04	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434430	**Analyst:**	ADC	**Run Date:**	06/18/2013 17:13
Collect Date:	06/11/2013 11:20	**Dilution:**	1	**File ID:**	6M117596
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	1.07		1.00	0.125
1,2-Dichloroethane	107-06-2	0.341	J	1.00	0.250
1,1-Dichloroethene	75-35-4	1.78		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.762	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	50.6		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	11.4		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	95.9	80	120	
Toluene-d8	94.8	88	110	
4-Bromofluorobenzene	99.3	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-27 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW04 **Prep Method:** 3015 **Prep Date:** 06/21/2013 11:10
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/21/2013 09:15
Workgroup #: WG434961 **Analyst:** QX **Run Date:** 06/21/2013 21:01
Collect Date: 06/11/2013 11:20 **Dilution:** 1 **File ID:** T2.062113.210149
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.620		0.200	0.100
Calcium, Total	7440-70-2	7.91		0.500	0.250
Iron, Total	7439-89-6	0.724		0.100	0.0500
Magnesium, Total	7439-95-4	3.95		0.500	0.250
Potassium, Total	7440-09-7	0.860	J	1.00	0.500
Sodium, Total	7440-23-5	59.5		0.500	0.250
Strontium, Total	7440-24-6	0.234		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13060636-27 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW04 **Prep Method:** 3015 **Prep Date:** 06/17/2013 10:20
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/19/2013 08:04
Workgroup #: WG434443 **Analyst:** JYH **Run Date:** 06/19/2013 16:04
Collect Date: 06/11/2013 11:20 **Dilution:** 1 **File ID:** NI.061913.160432
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0604		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000904		0.000600	0.000300
Chromium, Total	7440-47-3	0.00125	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00103	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00340		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00150		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00201		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-28	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW04 D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434430	**Analyst:**	ADC	**Run Date:**	06/18/2013 17:43
Collect Date:	06/11/2013 11:30	**Dilution:**	1	**File ID:**	6M117597
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	1.04		1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.87		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.728	J	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	51.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	11.6		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	95.3	80	120	
Toluene-d8	96.3	88	110	
4-Bromofluorobenzene	96.9	86	115	

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-28 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW04 D **Prep Method:** 3015 **Prep Date:** 06/21/2013 11:10
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/21/2013 09:15
Workgroup #: WG434961 **Analyst:** QX **Run Date:** 06/21/2013 21:05
Collect Date: 06/11/2013 11:30 **Dilution:** 1 **File ID:** T2.062113.210515
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.348		0.200	0.100
Calcium, Total	7440-70-2	7.76		0.500	0.250
Iron, Total	7439-89-6	0.557		0.100	0.0500
Magnesium, Total	7439-95-4	3.94		0.500	0.250
Potassium, Total	7440-09-7	0.837	J	1.00	0.500
Sodium, Total	7440-23-5	60.3		0.500	0.250
Strontium, Total	7440-24-6	0.236		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13060636-28 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW04 D **Prep Method:** 3015 **Prep Date:** 06/17/2013 10:20
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/19/2013 08:04
Workgroup #: WG434443 **Analyst:** JYH **Run Date:** 06/19/2013 16:08
Collect Date: 06/11/2013 11:30 **Dilution:** 1 **File ID:** NI.061913.160817
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0630		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000930		0.000600	0.000300
Chromium, Total	7440-47-3	0.00106	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00105	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00308		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00204		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00174		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #:	L13060636-29	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW-58	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434430	**Analyst:**	ADC	**Run Date:**	06/18/2013 18:14
Collect Date:	06/11/2013 12:30	**Dilution:**	1	**File ID:**	6M117598
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	25.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.02		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	94.6	80	120	
Toluene-d8	96.2	88	110	

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

4-Bromofluorobenzene	97.8	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-29 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW-58 **Prep Method:** 3015 **Prep Date:** 06/21/2013 11:10
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/21/2013 09:15
Workgroup #: WG434961 **Analyst:** QX **Run Date:** 06/21/2013 21:08
Collect Date: 06/11/2013 12:30 **Dilution:** 1 **File ID:** T2.062113.210840
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.216		0.200	0.100
Calcium, Total	7440-70-2	12.5		0.500	0.250
Iron, Total	7439-89-6	0.234		0.100	0.0500
Magnesium, Total	7439-95-4	5.04		0.500	0.250
Potassium, Total	7440-09-7	1.38		1.00	0.500
Sodium, Total	7440-23-5	55.1		0.500	0.250
Strontium, Total	7440-24-6	0.258		0.0500	0.0250

Sample #: L13060636-29 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW-58 **Prep Method:** 3015 **Prep Date:** 06/17/2013 10:20
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/19/2013 08:04
Workgroup #: WG434443 **Analyst:** JYH **Run Date:** 06/19/2013 16:12
Collect Date: 06/11/2013 12:30 **Dilution:** 1 **File ID:** NI.061913.161203
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.128		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00524		0.00200	0.00100
Copper, Total	7440-50-8	0.00206		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0110		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00234		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00142		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW03	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434430	**Analyst:**	ADC	**Run Date:**	06/18/2013 18:45
Collect Date:	06/11/2013 14:15	**Dilution:**	1	**File ID:**	6M117599
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	96.2	80	120	
Toluene-d8	95.7	88	110	
4-Bromofluorobenzene	98.5	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	35BWW03	**Prep Method:**	3015	**Prep Date:**	06/21/2013 11:10
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	06/21/2013 09:15
Workgroup #:	WG434961	**Analyst:**	QX	**Run Date:**	06/21/2013 21:12
Collect Date:	06/11/2013 14:15	**Dilution:**	1	**File ID:**	T2.062113.211206
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.129	J	0.200	0.100
Calcium, Total	7440-70-2	3.01		0.500	0.250
Iron, Total	7439-89-6	0.140		0.100	0.0500
Magnesium, Total	7439-95-4	0.765		0.500	0.250
Potassium, Total	7440-09-7	7.77		1.00	0.500
Sodium, Total	7440-23-5	134		0.500	0.250
Strontium, Total	7440-24-6	0.587		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #:	L13060636-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW03	**Prep Method:**	3015	**Prep Date:**	06/17/2013 10:20
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	06/19/2013 08:04
Workgroup #:	WG434443	**Analyst:**	JYH	**Run Date:**	06/19/2013 16:23
Collect Date:	06/11/2013 14:15	**Dilution:**	1	**File ID:**	NI.061913.162325
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0633		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00641		0.00200	0.00100
Copper, Total	7440-50-8	0.00100	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00384		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00442		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00100		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-31	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW09	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434430	**Analyst:**	ADC	**Run Date:**	06/18/2013 19:16
Collect Date:	06/12/2013 08:15	**Dilution:**	1	**File ID:**	6M117600
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.367	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	43.9		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	97.1	80	120	
Toluene-d8	95.9	88	110	
4-Bromofluorobenzene	97.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-31 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW09 **Prep Method:** 3015 **Prep Date:** 06/21/2013 11:10
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/21/2013 09:15
Workgroup #: WG434961 **Analyst:** QX **Run Date:** 06/21/2013 21:15
Collect Date: 06/12/2013 08:15 **Dilution:** 1 **File ID:** T2.062113.211533
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	69.3		0.500	0.250
Iron, Total	7439-89-6	0.182		0.100	0.0500
Magnesium, Total	7439-95-4	35.4		0.500	0.250
Potassium, Total	7440-09-7	3.79		1.00	0.500
Sodium, Total	7440-23-5	176		0.500	0.250
Strontium, Total	7440-24-6	2.13		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-31 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW09 **Prep Method:** 3015 **Prep Date:** 06/17/2013 10:20
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/19/2013 08:04
Workgroup #: WG434443 **Analyst:** JYH **Run Date:** 06/19/2013 16:27
Collect Date: 06/12/2013 08:15 **Dilution:** 1 **File ID:** NI.061913.162711
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0694		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000901		0.000600	0.000300
Chromium, Total	7440-47-3	0.00120	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00240		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0274		0.00200	0.00100
Nickel, Total	7440-02-0	0.00234	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00681		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000955	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13060636-32	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW05	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	04/02/2013 13:49
Workgroup #:	WG434430	**Analyst:**	ADC	**Run Date:**	06/18/2013 19:47
Collect Date:	06/12/2013 10:15	**Dilution:**	1	**File ID:**	6M117601
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.330	J	1.00	0.250

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Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.23		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	18.8		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	97.4	80	120	
Toluene-d8	94.6	88	110	
4-Bromofluorobenzene	98.2	86	115	

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L13060636-32 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW05 **Prep Method:** 3015 **Prep Date:** 06/21/2013 11:10
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 06/21/2013 09:15
Workgroup #: WG434961 **Analyst:** QX **Run Date:** 06/21/2013 21:19
Collect Date: 06/12/2013 10:15 **Dilution:** 1 **File ID:** T2.062113.211907
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.343		0.200	0.100
Calcium, Total	7440-70-2	12.3		0.500	0.250
Iron, Total	7439-89-6	2.07		0.100	0.0500
Magnesium, Total	7439-95-4	6.76		0.500	0.250
Potassium, Total	7440-09-7	1.03		1.00	0.500
Sodium, Total	7440-23-5	59.9		0.500	0.250
Strontium, Total	7440-24-6	0.430		0.0500	0.0250

Sample #: L13060636-32 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW05 **Prep Method:** 3015 **Prep Date:** 06/17/2013 10:20
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 06/19/2013 08:04
Workgroup #: WG434443 **Analyst:** JYH **Run Date:** 06/19/2013 16:30
Collect Date: 06/12/2013 10:15 **Dilution:** 1 **File ID:** NI.061913.163057
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0604		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00129	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00164	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000514	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0714		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00247		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00188		0.00100	0.000500
Zinc, Total	7440-66-6	0.0394		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L13060636
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

METHOD BLANK SUMMARY

Login Number: L13060636
Work Group: WG434308
Blank File ID: 6M117552
Blank Sample ID: WG434308-01
Prep Date: 06/17/13 15:45
Instrument ID: HPMS6
Analyzed Date: 06/17/13 15:45
Method: 8260B
Analyst: ADC

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG434308-02	6M117553	06/17/13 16:16	01
35BWW14MS	L13060636-05	6M117554	06/17/13 16:47	01
35BWW14MSD	L13060636-06	6M117555	06/17/13 17:18	01
TRIP BLANK 6 JUNE 2013	L13060636-03	6M117557	06/17/13 18:20	01
FIELD BLANK 7 JUNE 2013	L13060636-10	6M117558	06/17/13 18:51	01
TRIP BLANK 7 JUNE 2013	L13060636-12	6M117559	06/17/13 19:21	01
TRIP BLANK 7 JUNE 2013	L13060636-14	6M117560	06/17/13 19:52	01
FIELD BLANK 10 JUNE 2013	L13060636-15	6M117561	06/17/13 20:23	01
35BWW08	L13060636-01	6M117562	06/17/13 20:54	01
35BWW14	L13060636-04	6M117563	06/17/13 21:26	01
MW 4-1	L13060636-07	6M117564	06/17/13 21:57	01
MW 4-1 D	L13060636-08	6M117565	06/17/13 22:29	01
MW 4-2	L13060636-09	6M117566	06/17/13 23:00	01
MW 4-3	L13060636-11	6M117567	06/17/13 23:31	01
MW 1-1	L13060636-02	6M117568	06/18/13 00:02	01
MW 1-2	L13060636-13	6M117569	06/18/13 00:34	01
MW 2-2	L13060636-19	6M117570	06/18/13 01:05	01
MW 2-3	L13060636-20	6M117571	06/18/13 01:36	01
MW 3-1	L13060636-21	6M117572	06/18/13 02:08	01

Report Name: BLANK_SUMMARY
PDF File ID: 2933771
Report generated 06/24/2013 13:36

METHOD BLANK SUMMARY

Login Number: L13060636
Blank File ID: 6M117574
Prep Date: 06/18/13 03:09
Analyzed Date: 06/18/13 03:09
Analyst: ADC

Work Group: WG434308
Blank Sample ID: WG434308-06
Instrument ID: HPMS6
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG434308-02	6M117553	06/17/13 16:16	01
35BWW14MS	L13060636-05	6M117554	06/17/13 16:47	01
35BWW14MSD	L13060636-06	6M117555	06/17/13 17:18	01
TRIP BLANK 6 JUNE 2013	L13060636-03	6M117557	06/17/13 18:20	01
FIELD BLANK 7 JUNE 2013	L13060636-10	6M117558	06/17/13 18:51	01
TRIP BLANK 7 JUNE 2013	L13060636-12	6M117559	06/17/13 19:21	01
TRIP BLANK 7 JUNE 2013	L13060636-14	6M117560	06/17/13 19:52	01
FIELD BLANK 10 JUNE 2013	L13060636-15	6M117561	06/17/13 20:23	01
35BWW08	L13060636-01	6M117562	06/17/13 20:54	01
35BWW14	L13060636-04	6M117563	06/17/13 21:26	01
MW 4-1	L13060636-07	6M117564	06/17/13 21:57	01
MW 4-1 D	L13060636-08	6M117565	06/17/13 22:29	01
MW 4-2	L13060636-09	6M117566	06/17/13 23:00	01
MW 4-3	L13060636-11	6M117567	06/17/13 23:31	01
MW 1-1	L13060636-02	6M117568	06/18/13 00:02	01
MW 1-2	L13060636-13	6M117569	06/18/13 00:34	01
MW 2-2	L13060636-19	6M117570	06/18/13 01:05	01
MW 2-3	L13060636-20	6M117571	06/18/13 01:36	01
MW 3-1	L13060636-21	6M117572	06/18/13 02:08	01

Report Name: BLANK_SUMMARY
PDF File ID: 2933771
Report generated 06/24/2013 13:36

METHOD BLANK SUMMARY

Login Number: L13060636
Blank File ID: 6M117585
Prep Date: 06/18/13 11:29
Analyzed Date: 06/18/13 11:29
Analyst: ADC

Work Group: WG434430
Blank Sample ID: WG434430-01
Instrument ID: HPMS6
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG434430-02	6M117586	06/18/13 12:00	01
MW 2-1 MS	L13060636-17	6M117587	06/18/13 12:32	01
MW 2-1 MSD	L13060636-18	6M117588	06/18/13 13:03	01
TRIP BLANK 11 JUNE 2013	L13060636-23	6M117590	06/18/13 14:05	01
FIELD BLANK 11 JUNE 2013	L13060636-24	6M117591	06/18/13 14:37	01
MW 2-1	L13060636-16	6M117592	06/18/13 15:08	01
MW 3-1 D	L13060636-22	6M117593	06/18/13 15:39	01
MW 3-2	L13060636-25	6M117594	06/18/13 16:10	01
MW 3-3	L13060636-26	6M117595	06/18/13 16:41	01
35BWW04	L13060636-27	6M117596	06/18/13 17:13	01
35BWW04 D	L13060636-28	6M117597	06/18/13 17:43	01
MW-58	L13060636-29	6M117598	06/18/13 18:14	01
35BWW03	L13060636-30	6M117599	06/18/13 18:45	01
35BWW09	L13060636-31	6M117600	06/18/13 19:16	01
35BWW05	L13060636-32	6M117601	06/18/13 19:47	01

Report Name: BLANK_SUMMARY
PDF File ID: 2933771
Report generated 06/24/2013 13:36

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13060636 Prep Date:06/17/13 15:45 Sample ID:WG434308-01
Instrument ID:HPMS6 Run Date:06/17/13 15:45 Prep Method:5030B/5030C/503
File ID:6M117552 Analyst:ADC Method:8260B
Workgroup (AAB#):WG434308 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS6-02-APR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13060636 Prep Date: 06/17/13 15:45 Sample ID: WG434308-01
Instrument ID: HPMS6 Run Date: 06/17/13 15:45 Prep Method: 5030B/5030C/503
File ID: 6M117552 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG434308 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-02-APR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	104	86 - 118	PASS
1,2-Dichloroethane-d4	98.0	80 - 120	PASS
Toluene-d8	97.3	88 - 110	PASS
4-Bromofluorobenzene	103	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2933772
24-JUN-2013 13:36

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13060636 Prep Date:06/18/13 03:09 Sample ID:WG434308-06
Instrument ID:HPMS6 Run Date:06/18/13 03:09 Prep Method:5030B/5030C/503
File ID:6M117574 Analyst:ADC Method:8260B
Workgroup (AAB#):WG434308 Matrix:Water 2 Units:ug/L
Contract #: Cal ID: HPMS6-02-APR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 2933772
24-JUN-2013 13:36

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13060636 Prep Date: 06/18/13 03:09 Sample ID: WG434308-06
Instrument ID: HPMS6 Run Date: 06/18/13 03:09 Prep Method: 5030B/5030C/503
File ID: 6M117574 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG434308 Matrix: Water 2 Units: ug/L
Contract #: Cal ID: HPMS6-02-APR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	105	86 - 118	PASS
1,2-Dichloroethane-d4	97.5	80 - 120	PASS
Toluene-d8	97.2	88 - 110	PASS
4-Bromofluorobenzene	98.8	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2933772
24-JUN-2013 13:36

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13060636 Prep Date:06/18/13 11:29 Sample ID:WG434430-01
Instrument ID:HPMS6 Run Date:06/18/13 11:29 Prep Method:5030B/5030C/503
File ID:6M117585 Analyst:ADC Method:8260B
Workgroup (AAB#):WG434430 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS6-02-APR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13060636 Prep Date: 06/18/13 11:29 Sample ID: WG434430-01
Instrument ID: HPMS6 Run Date: 06/18/13 11:29 Prep Method: 5030B/5030C/503
File ID: 6M117585 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG434430 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-02-APR-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	102	86 - 118	PASS
1,2-Dichloroethane-d4	90.6	80 - 120	PASS
Toluene-d8	97.0	88 - 110	PASS
4-Bromofluorobenzene	99.5	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
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Login Number: L13060636 Run Date: 06/17/2013 Sample ID: WG434308-02
Instrument ID: HPMS6 Run Time: 16:16 Prep Method: 5030B/5030C/503
File ID: 6M117553 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG434308 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD58291 Cal ID: HPMS6-02-APR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	10.6	52.8	40 - 180	
Benzene	20.0	18.9	94.7	80 - 121	
Bromobenzene	20.0	20.4	102	80 - 120	
Bromochloromethane	20.0	20.5	102	65 - 130	
Bromodichloromethane	20.0	20.0	99.9	80 - 131	
Bromoform	20.0	19.7	98.4	70 - 130	
Bromomethane	20.0	15.5	77.6	30 - 145	
2-Butanone	20.0	11.5	57.5	10 - 170	
n-Butylbenzene	20.0	21.2	106	80 - 131	
sec-Butylbenzene	20.0	19.2	96.2	80 - 127	
tert-Butylbenzene	20.0	20.0	99.9	80 - 126	
Carbon disulfide	20.0	17.0	84.8	58 - 128	
Carbon tetrachloride	20.0	23.2	116	65 - 140	
Chlorobenzene	20.0	17.8	89.1	80 - 120	
Chlorodibromomethane	20.0	18.8	93.8	60 - 135	
Chloroethane	20.0	18.1	90.5	60 - 135	
2-Chloroethyl vinyl ether	20.0	13.1	65.5	45 - 160	
Chloroform	20.0	20.6	103	80 - 125	
Chloromethane	20.0	19.3	96.3	40 - 125	
2-Chlorotoluene	20.0	18.7	93.4	80 - 127	
4-Chlorotoluene	20.0	17.4	87.2	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	16.4	81.9	50 - 130	
1,2-Dibromoethane	20.0	19.0	95.1	80 - 129	
Dibromomethane	20.0	19.6	98.0	75 - 125	
1,2-Dichlorobenzene	20.0	18.5	92.4	80 - 125	
1,3-Dichlorobenzene	20.0	18.7	93.4	80 - 120	
1,4-Dichlorobenzene	20.0	19.8	99.2	80 - 120	
Dichlorodifluoromethane	20.0	29.5	147	40 - 160	
1,1-Dichloroethane	20.0	18.0	89.9	80 - 125	
1,2-Dichloroethane	20.0	20.2	101	80 - 129	
1,1-Dichloroethene	20.0	18.4	91.9	80 - 132	
cis-1,2-Dichloroethene	20.0	20.1	101	70 - 125	
trans-1,2-Dichloroethene	20.0	20.6	103	80 - 127	
1,2-Dichloropropane	20.0	17.0	85.1	80 - 120	
1,3-Dichloropropane	20.0	17.7	88.3	80 - 120	
2,2-Dichloropropane	20.0	20.9	105	80 - 133	
cis-1,3-Dichloropropene	20.0	20.2	101	70 - 130	
trans-1,3-Dichloropropene	20.0	17.8	88.9	80 - 130	
1,1-Dichloropropene	20.0	19.7	98.3	75 - 130	
Ethylbenzene	20.0	19.8	98.9	80 - 122	
2-Hexanone	20.0	10.0	50.2	55 - 130	*

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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/17/2013 Sample ID: WG434308-02
Instrument ID: HPMS6 Run Time: 16:16 Prep Method: 5030B/5030C/503
File ID: 6M117553 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG434308 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD58291 Cal ID: HPMS6-02-APR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	26.0	130	72 - 132	
Isopropylbenzene	20.0	19.6	98.2	80 - 122	
p-Isopropyltoluene	20.0	20.3	102	80 - 122	
4-Methyl-2-pentanone	20.0	13.2	66.1	64 - 140	
Methylene chloride	20.0	19.0	94.9	80 - 123	
Naphthalene	20.0	18.0	90.2	59 - 149	
n-Propylbenzene	20.0	17.9	89.7	80 - 129	
Styrene	20.0	19.0	95.1	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	21.7	109	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	15.6	78.1	79 - 125	*
Tetrachloroethene	20.0	21.5	107	80 - 124	
Toluene	20.0	18.8	94.2	80 - 124	
1,2,3-Trichlorobenzene	20.0	21.3	106	55 - 140	
1,2,4-Trichlorobenzene	20.0	21.5	108	65 - 135	
1,1,1-Trichloroethane	20.0	22.6	113	80 - 134	
1,1,2-Trichloroethane	20.0	18.5	92.6	80 - 125	
Trichloroethene	20.0	23.0	115	80 - 122	
Trichlorofluoromethane	20.0	24.0	120	62 - 151	
1,2,3-Trichloropropane	20.0	18.2	91.0	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.6	103	80 - 125	
1,3,5-Trimethylbenzene	20.0	21.6	108	80 - 127	
Vinyl acetate	20.0	14.6	73.0	10 - 190	
Vinyl chloride	20.0	22.8	114	50 - 170	
o-Xylene	20.0	18.4	92.0	80 - 122	
m-,p-Xylene	40.0	38.7	96.7	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	103	86 - 118	PASS
1,2-Dichloroethane-d4	98.2	80 - 120	PASS
Toluene-d8	97.0	88 - 110	PASS
4-Bromofluorobenzene	102	86 - 115	PASS

* EXCEEDS %REC LIMIT

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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/18/2013 Sample ID: WG434430-02
Instrument ID: HPMS6 Run Time: 12:00 Prep Method: 5030B/5030C/503
File ID: 6M117586 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG434430 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD58291 Cal ID: HPMS6-02-APR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	10.5	52.4	40 - 180	
Benzene	20.0	19.6	98.0	80 - 121	
Bromobenzene	20.0	20.8	104	80 - 120	
Bromochloromethane	20.0	21.8	109	65 - 130	
Bromodichloromethane	20.0	19.7	98.3	80 - 131	
Bromoform	20.0	19.8	98.8	70 - 130	
Bromomethane	20.0	19.8	99.2	30 - 145	
2-Butanone	20.0	11.6	58.2	10 - 170	
n-Butylbenzene	20.0	20.9	105	80 - 131	
sec-Butylbenzene	20.0	19.4	96.9	80 - 127	
tert-Butylbenzene	20.0	20.3	101	80 - 126	
Carbon disulfide	20.0	18.3	91.6	58 - 128	
Carbon tetrachloride	20.0	22.2	111	65 - 140	
Chlorobenzene	20.0	18.6	92.9	80 - 120	
Chlorodibromomethane	20.0	18.9	94.3	60 - 135	
Chloroethane	20.0	19.3	96.3	60 - 135	
2-Chloroethyl vinyl ether	20.0	13.9	69.4	45 - 160	
Chloroform	20.0	20.4	102	80 - 125	
Chloromethane	20.0	20.4	102	40 - 125	
2-Chlorotoluene	20.0	18.3	91.3	80 - 127	
4-Chlorotoluene	20.0	17.6	88.2	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	14.4	71.9	50 - 130	
1,2-Dibromoethane	20.0	19.5	97.3	80 - 129	
Dibromomethane	20.0	19.6	98.0	75 - 125	
1,2-Dichlorobenzene	20.0	18.8	94.0	80 - 125	
1,3-Dichlorobenzene	20.0	19.0	95.1	80 - 120	
1,4-Dichlorobenzene	20.0	20.1	100	80 - 120	
Dichlorodifluoromethane	20.0	28.2	141	40 - 160	
1,1-Dichloroethane	20.0	18.2	91.2	80 - 125	
1,2-Dichloroethane	20.0	19.3	96.5	80 - 129	
1,1-Dichloroethene	20.0	18.4	91.9	80 - 132	
cis-1,2-Dichloroethene	20.0	21.2	106	70 - 125	
trans-1,2-Dichloroethene	20.0	21.6	108	80 - 127	
1,2-Dichloropropane	20.0	17.4	86.9	80 - 120	
1,3-Dichloropropane	20.0	18.1	90.7	80 - 120	
2,2-Dichloropropane	20.0	19.7	98.7	80 - 133	
cis-1,3-Dichloropropene	20.0	20.1	100	70 - 130	
trans-1,3-Dichloropropene	20.0	17.4	86.9	80 - 130	
1,1-Dichloropropene	20.0	19.9	99.5	75 - 130	
Ethylbenzene	20.0	20.7	103	80 - 122	
2-Hexanone	20.0	10.6	53.2	55 - 130	*

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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/18/2013 Sample ID: WG434430-02
Instrument ID: HPMS6 Run Time: 12:00 Prep Method: 5030B/5030C/503
File ID: 6M117586 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG434430 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD58291 Cal ID: HPMS6-02-APR-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	25.4	127	72 - 132	
Isopropylbenzene	20.0	20.0	99.8	80 - 122	
p-Isopropyltoluene	20.0	20.3	101	80 - 122	
4-Methyl-2-pentanone	20.0	14.2	71.1	64 - 140	
Methylene chloride	20.0	20.0	99.9	80 - 123	
Naphthalene	20.0	18.0	90.2	59 - 149	
n-Propylbenzene	20.0	18.2	90.8	80 - 129	
Styrene	20.0	19.8	99.2	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	21.9	110	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	16.0	80.2	79 - 125	
Tetrachloroethene	20.0	22.5	113	80 - 124	
Toluene	20.0	19.6	97.8	80 - 124	
1,2,3-Trichlorobenzene	20.0	20.8	104	55 - 140	
1,2,4-Trichlorobenzene	20.0	21.6	108	65 - 135	
1,1,1-Trichloroethane	20.0	21.8	109	80 - 134	
1,1,2-Trichloroethane	20.0	19.1	95.4	80 - 125	
Trichloroethene	20.0	23.9	120	80 - 122	
Trichlorofluoromethane	20.0	22.8	114	62 - 151	
1,2,3-Trichloropropane	20.0	17.6	87.8	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.3	102	80 - 125	
1,3,5-Trimethylbenzene	20.0	21.5	107	80 - 127	
Vinyl acetate	20.0	14.4	72.0	10 - 190	
Vinyl chloride	20.0	23.7	118	50 - 170	
o-Xylene	20.0	19.0	95.0	80 - 122	
m-,p-Xylene	40.0	40.2	101	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	101	86 - 118	PASS
1,2-Dichloroethane-d4	90.4	80 - 120	PASS
Toluene-d8	97.1	88 - 110	PASS
4-Bromofluorobenzene	99.0	86 - 115	PASS

* EXCEEDS %REC LIMIT

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13060636 Cal ID: HPMS6- 02-APR-13 Worknum: WG434308

Instrument ID: HPMS6 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13060636-04 File ID: 6M117563 Dil: 1 Method: 5035A

Sample ID: L13060636-05 MS File ID: 6M117554 Dil: 1 Matrix: 8260B

Sample ID: L13060636-06 MSD File ID: 6M117555 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	21.5	107	20.0	21.8	109	1.57	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	22.7	113	20.0	21.8	109	3.78	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	15.9	79.4	20.0	15.9	79.4	0.0553	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	18.6	92.8	20.0	18.5	92.3	0.586	80 - 125	20	
1,1-Dichloroethane	4.27	20.0	21.1	84.3	20.0	21.4	85.4	1.10	80 - 125	20	
1,1-Dichloroethene	44.7	20.0	49.9	25.9	20.0	45.3	2.87	9.68	80 - 132	20	*
1,1-Dichloropropene	ND	20.0	19.9	99.3	20.0	19.1	95.3	4.12	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	21.3	107	20.0	21.5	107	0.701	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	18.2	90.9	20.0	18.1	90.4	0.621	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	21.6	108	20.0	21.9	110	1.54	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	20.2	101	20.0	20.3	101	0.145	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	16.3	81.4	20.0	15.8	79.2	2.72	50 - 130	20	
1,2-Dibromoethane	ND	20.0	19.1	95.4	20.0	19.0	94.9	0.516	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	18.5	92.3	20.0	18.7	93.6	1.45	80 - 125	20	
1,2-Dichloroethane	0.310	20.0	20.7	102	20.0	20.5	101	1.19	80 - 129	20	
1,2-Dichloropropane	ND	20.0	17.0	85	20.0	17.0	84.8	0.171	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	21.2	106	20.0	21.3	106	0.608	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	18.5	92.6	20.0	18.7	93.6	1.03	80 - 120	20	
1,3-Dichloropropane	ND	20.0	17.6	87.9	20.0	18.1	90.3	2.68	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	19.6	98.1	20.0	20.1	100	2.37	80 - 120	20	
2,2-Dichloropropane	ND	20.0	21.3	106	20.0	20.8	104	2.31	80 - 133	20	
2-Butanone	ND	20.0	11.2	55.9	20.0	10.9	54.4	2.81	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	18.4	92.2	20.0	18.8	93.8	1.76	80 - 127	20	
2-Hexanone	ND	20.0	10.7	53.7	20.0	11.0	54.8	1.98	55 - 130	20	*
4-Chlorotoluene	ND	20.0	17.4	87.1	20.0	17.0	85.2	2.17	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	13.2	66.2	20.0	13.6	67.9	2.50	64 - 140	20	
Acetone	ND	20.0	10.5	52.7	20.0	10.6	53	0.535	40 - 180	20	
Benzene	0.195	20.0	18.8	92.9	20.0	18.9	93.6	0.662	80 - 121	20	
Bromobenzene	ND	20.0	20.3	102	20.0	20.4	102	0.562	80 - 120	20	
Bromochloromethane	ND	20.0	21.2	106	20.0	21.3	106	0.614	65 - 130	20	
Bromodichloromethane	ND	20.0	20.0	100	20.0	20.2	101	1.11	80 - 131	20	
Bromoform	ND	20.0	20.3	101	20.0	20.3	101	0.0228	70 - 130	20	
Bromomethane	ND	20.0	15.8	79	20.0	16.6	82.9	4.78	30 - 145	20	
Carbon disulfide	ND	20.0	17.7	88.4	20.0	17.2	86.2	2.54	58 - 128	20	
Carbon tetrachloride	ND	20.0	23.4	117	20.0	22.5	112	4.02	65 - 140	20	
Chlorobenzene	0.138	20.0	17.9	88.9	20.0	18.3	90.7	1.96	80 - 120	20	
Chloroethane	ND	20.0	18.1	90.6	20.0	18.1	90.6	0.0261	60 - 135	20	
Chloroform	0.162	20.0	20.7	102	20.0	20.6	102	0.379	80 - 125	20	
Chloromethane	ND	20.0	19.4	97.2	20.0	19.4	96.9	0.319	40 - 125	20	
cis-1,2-Dichloroethene	12.7	20.0	31.0	91.3	20.0	30.8	90.2	0.708	70 - 125	20	

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13060636 Cal ID: HPMS6 02-APR-13 Worknum: WG434308

Instrument ID: HPMS6 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13060636-04 File ID: 6M117563 Dil: 1 Method: 5035A

Sample ID: L13060636-05 MS File ID: 6M117554 Dil: 1 Matrix: 8260B

Sample ID: L13060636-06 MSD File ID: 6M117555 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	20.2	101	20.0	20.3	101	0.377	70 - 130	20	
Chlorodibromomethane	ND	20.0	18.7	93.6	20.0	19.3	96.3	2.91	60 - 135	20	
Dibromomethane	ND	20.0	19.7	98.7	20.0	20.0	100	1.57	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	30.3	151	20.0	27.0	135	11.6	50 - 160	20	
Ethylbenzene	ND	20.0	19.7	98.5	20.0	20.1	100	1.85	80 - 122	20	
Hexachlorobutadiene	ND	20.0	26.0	130	20.0	25.8	129	0.792	72 - 132	20	
Isopropylbenzene	ND	20.0	19.6	97.9	20.0	19.6	98	0.135	80 - 122	20	
m-,p-Xylene	ND	40.0	38.4	96.1	40.0	39.2	98	1.90	80 - 122	20	
Methylene chloride	ND	20.0	19.2	96.2	20.0	19.4	97	0.846	80 - 123	20	
n-Butylbenzene	ND	20.0	21.2	106	20.0	20.9	105	1.18	80 - 131	20	
n-Propylbenzene	ND	20.0	17.8	89.1	20.0	17.8	88.8	0.271	80 - 129	20	
Naphthalene	ND	20.0	18.1	90.6	20.0	18.6	93.2	2.82	59 - 149	20	
o-Xylene	ND	20.0	18.3	91.4	20.0	18.6	92.9	1.73	80 - 122	20	
p-Isopropyltoluene	ND	20.0	20.2	101	20.0	20.1	100	0.569	80 - 122	20	
sec-Butylbenzene	ND	20.0	19.0	95.2	20.0	18.8	94.1	1.14	80 - 127	20	
Styrene	ND	20.0	19.0	94.9	20.0	19.4	97.2	2.35	80 - 123	20	
tert-Butylbenzene	ND	20.0	19.4	97.1	20.0	19.4	97.2	0.0876	80 - 126	20	
Tetrachloroethene	24.0	20.0	39.3	76.4	20.0	38.0	70.1	3.27	80 - 124	20	*
Toluene	ND	20.0	18.8	94	20.0	19.0	94.8	0.845	80 - 124	20	
trans-1,2-Dichloroethene	0.358	20.0	20.9	103	20.0	20.7	102	1.04	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	17.7	88.6	20.0	17.9	89.3	0.843	80 - 130	20	
Trichloroethene	90.9	20.0	92.2	6.63	20.0	89.3	-7.95	3.21	80 - 122	20	*
Trichlorofluoromethane	ND	20.0	24.2	121	20.0	22.2	111	8.72	62 - 151	20	
Vinyl acetate	ND	20.0	14.6	73.2	20.0	14.8	73.8	0.804	10 - 190	20	
Vinyl chloride	3.43	20.0	24.8	107	20.0	23.7	101	4.64	50 - 170	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2933774

Report generated 06/24/2013 13:36

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13060636 Cal ID: HPMS6- 02-APR-13 Worknum: WG434430

Instrument ID: HPMS6 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13060636-16 File ID: 6M117592 Dil: 1 Method: 5035A

Sample ID: L13060636-17 MS File ID: 6M117587 Dil: 1 Matrix: 8260B

Sample ID: L13060636-18 MSD File ID: 6M117588 Dil: 1 Units: Water ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	21.8	109	20.0	21.2	106	2.81	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	21.4	107	20.0	20.3	101	5.23	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	16.4	82	20.0	16.0	80	2.52	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	19.0	95	20.0	19.1	95.5	0.514	80 - 125	20	
1,1-Dichloroethane	ND	20.0	18.0	89.9	20.0	17.4	86.9	3.39	80 - 125	20	
1,1-Dichloroethene	ND	20.0	17.8	88.9	20.0	16.5	82.4	7.58	80 - 132	20	
1,1-Dichloropropene	ND	20.0	19.4	96.9	20.0	18.3	91.3	5.97	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	21.3	106	20.0	20.4	102	4.36	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	17.9	89.5	20.0	17.9	89.7	0.274	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	21.8	109	20.0	20.7	104	4.89	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	20.2	101	20.0	19.4	96.8	4.06	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	16.1	80.3	20.0	15.2	75.8	5.84	50 - 130	20	
1,2-Dibromoethane	ND	20.0	19.4	97.1	20.0	19.4	97	0.0862	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	18.7	93.7	20.0	18.1	90.5	3.49	80 - 125	20	
1,2-Dichloroethane	ND	20.0	19.6	98.1	20.0	19.1	95.7	2.49	80 - 129	20	
1,2-Dichloropropane	ND	20.0	17.2	86	20.0	16.8	83.9	2.52	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	21.3	107	20.0	20.1	101	5.87	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	19.0	95.1	20.0	18.1	90.5	5.01	80 - 120	20	
1,3-Dichloropropane	ND	20.0	18.2	91	20.0	17.9	89.5	1.66	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	20.3	101	20.0	19.3	96.6	4.86	80 - 120	20	
2,2-Dichloropropane	ND	20.0	20.3	101	20.0	19.1	95.3	6.05	80 - 133	20	
2-Butanone	ND	20.0	11.0	54.8	20.0	11.8	59.2	7.77	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	17.6	88	20.0	17.3	86.4	1.86	80 - 127	20	
2-Hexanone	ND	20.0	10.9	54.6	20.0	11.1	55.6	1.83	55 - 130	20	*
4-Chlorotoluene	ND	20.0	18.2	91.1	20.0	16.6	83.2	9.02	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	13.6	67.8	20.0	13.7	68.3	0.830	64 - 140	20	
Acetone	ND	20.0	10.4	52.2	20.0	10.3	51.7	0.912	40 - 180	20	
Benzene	ND	20.0	19.2	95.8	20.0	18.5	92.6	3.36	80 - 121	20	
Bromobenzene	ND	20.0	20.6	103	20.0	20.1	101	2.29	80 - 120	20	
Bromochloromethane	ND	20.0	21.8	109	20.0	21.5	107	1.29	65 - 130	20	
Bromodichloromethane	ND	20.0	19.8	99.2	20.0	19.3	96.3	3.00	80 - 131	20	
Bromoform	ND	20.0	19.9	99.6	20.0	19.7	98.4	1.24	70 - 130	20	
Bromomethane	ND	20.0	19.2	95.8	20.0	18.8	94.2	1.66	30 - 145	20	
Carbon disulfide	ND	20.0	18.2	90.9	20.0	17.5	87.4	4.00	58 - 128	20	
Carbon tetrachloride	ND	20.0	21.7	108	20.0	20.3	102	6.45	65 - 140	20	
Chlorobenzene	ND	20.0	18.6	92.8	20.0	17.9	89.4	3.69	80 - 120	20	
Chloroethane	ND	20.0	18.7	93.7	20.0	17.9	89.3	4.80	60 - 135	20	
Chloroform	ND	20.0	20.3	102	20.0	19.9	99.3	2.40	80 - 125	20	
Chloromethane	ND	20.0	19.8	99.1	20.0	19.1	95.7	3.52	40 - 125	20	
cis-1,2-Dichloroethene	ND	20.0	21.3	106	20.0	20.8	104	2.46	70 - 125	20	

MS_MSD - Modified 03/06/2008

PDF File ID: 2933774

Report generated 06/24/2013 13:36

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13060636 Cal ID: HPMS6 02-APR-13 Worknum: WG434430

Instrument ID: HPMS6 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13060636-16 File ID: 6M117592 Dil: 1 Method: 5035A

Sample ID: L13060636-17 MS File ID: 6M117587 Dil: 1 Matrix: 8260B

Sample ID: L13060636-18 MSD File ID: 6M117588 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	20.4	102	20.0	20.0	100	1.81	70 - 130	20	
Chlorodibromomethane	ND	20.0	18.8	93.9	20.0	18.6	92.9	1.13	60 - 135	20	
Dibromomethane	ND	20.0	19.7	98.7	20.0	20.0	99.8	1.08	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	26.0	130	20.0	24.3	122	6.55	50 - 160	20	
Ethylbenzene	ND	20.0	20.1	100	20.0	19.4	96.9	3.47	80 - 122	20	
Hexachlorobutadiene	ND	20.0	25.1	126	20.0	23.9	120	5.00	72 - 132	20	
Isopropylbenzene	ND	20.0	19.7	98.6	20.0	18.6	93.2	5.66	80 - 122	20	
m-,p-Xylene	ND	40.0	39.7	99.3	40.0	37.9	94.8	4.70	80 - 122	20	
Methylene chloride	ND	20.0	20.0	99.9	20.0	19.7	98.4	1.52	80 - 123	20	
n-Butylbenzene	ND	20.0	20.8	104	20.0	19.5	97.3	6.50	80 - 131	20	
n-Propylbenzene	ND	20.0	17.8	89.2	20.0	16.7	83.6	6.46	80 - 129	20	
Naphthalene	ND	20.0	18.4	91.9	20.0	16.0	80.2	13.6	59 - 149	20	
o-Xylene	ND	20.0	18.9	94.7	20.0	18.2	91.1	3.83	80 - 122	20	
p-Isopropyltoluene	ND	20.0	20.1	100	20.0	18.9	94.5	6.10	80 - 122	20	
sec-Butylbenzene	ND	20.0	18.9	94.4	20.0	17.8	88.9	6.04	80 - 127	20	
Styrene	ND	20.0	19.6	98.2	20.0	19.2	96.2	2.06	80 - 123	20	
tert-Butylbenzene	ND	20.0	19.8	98.8	20.0	18.6	93.1	6.00	80 - 126	20	
Tetrachloroethene	2.84	20.0	24.3	107	20.0	23.2	102	4.63	80 - 124	20	
Toluene	ND	20.0	19.4	96.8	20.0	18.6	93.1	3.88	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	21.3	106	20.0	20.5	102	3.97	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	17.5	87.7	20.0	17.4	86.8	0.953	80 - 130	20	
Trichloroethene	3.35	20.0	26.2	114	20.0	25.1	109	4.00	80 - 122	20	
Trichlorofluoromethane	ND	20.0	21.5	107	20.0	20.4	102	5.11	62 - 151	20	
Vinyl acetate	ND	20.0	14.9	74.3	20.0	14.7	73.6	0.850	10 - 190	20	
Vinyl chloride	ND	20.0	22.0	110	20.0	20.7	104	5.93	50 - 170	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2933774

Report generated 06/24/2013 13:36

METHOD BLANK SUMMARY

Login Number: L13060636
Work Group: WG434983
Blank File ID: P2.062213.084750
Blank Sample ID: WG434432-02
Prep Date: 06/18/13 09:48
Instrument ID: PE-ICP2
Analyzed Date: 06/22/13 08:47
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG434432-03	P2.062213.085050	06/22/13 08:50	01
FLT_BLK	WG434432-04	P2.062213.085554	06/22/13 08:55	01
35BWW14	L13060636-04	P2.062213.085854	06/22/13 08:58	01
35BWW14MS	L13060636-05	P2.062213.090156	06/22/13 09:01	01
35BWW14MSD	L13060636-06	P2.062213.090401	06/22/13 09:04	01
MW 4-1 D	L13060636-08	P2.062213.092505	06/22/13 09:25	01
MW 4-2	L13060636-09	P2.062213.092806	06/22/13 09:28	01
FIELD BLANK 7 JUNE 2013	L13060636-10	P2.062213.093110	06/22/13 09:31	01
MW 4-3	L13060636-11	P2.062213.093410	06/22/13 09:34	01
MW 1-2	L13060636-13	P2.062213.093711	06/22/13 09:37	01

Report Name: BLANK_SUMMARY
PDF File ID: 2941637
Report generated 07/02/2013 08:44

METHOD BLANK SUMMARY

Login Number: L13060636
Work Group: WG435022
Blank File ID: P2.062213.133441
Blank Sample ID: WG434305-02
Prep Date: 06/17/13 13:44
Instrument ID: PE-ICP2
Analyzed Date: 06/22/13 13:34
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG434305-03	P2.062213.133741	06/22/13 13:37	01
FLT_BLK	WG434305-04	P2.062213.133945	06/22/13 13:39	01
35BWW08	L13060636-01	P2.062213.142855	06/22/13 14:28	01
MW 1-1	L13060636-02	P2.062213.143200	06/22/13 14:32	01
MW 4-1	L13060636-07	P2.062213.144013	06/22/13 14:40	01
LCS	WG434305-03	P2.062513.101935	06/25/13 10:19	02

Report Name: BLANK_SUMMARY
PDF File ID: 2941637
Report generated 07/02/2013 08:44

METHOD BLANK SUMMARY

Login Number: L13060636
Work Group: WG435260
Blank File ID: P2.062413.144058
Blank Sample ID: WG435148-03
Prep Date: 06/23/13 09:17
Instrument ID: PE-ICP2
Analyzed Date: 06/24/13 14:40
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG435148-04	P2.062413.144400	06/24/13 14:44	01
MW 2-1	L13060636-16	P2.062413.144604	06/24/13 14:46	01
MW 2-1 MS	L13060636-17	P2.062413.144905	06/24/13 14:49	01
MW 2-1 MSD	L13060636-18	P2.062413.145109	06/24/13 14:51	01
LCS	WG435148-04	P2.070113.115927	07/01/13 11:59	02
FIELD BLANK 10 JUNE 2013	L13060636-15	P2.070113.120131	07/01/13 12:01	01
MW 2-2	L13060636-19	P2.070113.120934	07/01/13 12:09	01
MW 2-3	L13060636-20	P2.070113.121234	07/01/13 12:12	01
MW 3-1	L13060636-21	P2.070113.121538	07/01/13 12:15	01
MW 3-1 D	L13060636-22	P2.070113.121843	07/01/13 12:18	01

Report Name: BLANK_SUMMARY
PDF File ID: 2941637
Report generated 07/02/2013 08:44

METHOD BLANK SUMMARY

Login Number: L13060636
Work Group: WG434961
Blank File ID: T2.062113.193409
Blank Sample ID: WG434923-03
Prep Date: 06/21/13 11:10
Instrument ID: ICP-THERMO2
Analyzed Date: 06/21/13 19:34
Method: 6010B
Analyst: QX

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG434923-04	T2.062113.193740	06/21/13 19:37	01
FIELD BLANK 11 JUNE 2013	L13060636-24	T2.062113.203748	06/21/13 20:37	01
MW 3-2	L13060636-25	T2.062113.205459	06/21/13 20:54	01
MW 3-3	L13060636-26	T2.062113.205824	06/21/13 20:58	01
35BWW04	L13060636-27	T2.062113.210149	06/21/13 21:01	01
35BWW04 D	L13060636-28	T2.062113.210515	06/21/13 21:05	01
MW-58	L13060636-29	T2.062113.210840	06/21/13 21:08	01
35BWW03	L13060636-30	T2.062113.211206	06/21/13 21:12	01
35BWW09	L13060636-31	T2.062113.211533	06/21/13 21:15	01
35BWW05	L13060636-32	T2.062113.211907	06/21/13 21:19	01

Report Name: BLANK_SUMMARY
PDF File ID: 2941884
Report generated 06/22/2013 12:19

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13060636 Prep Date: 06/18/13 09:48 Sample ID: WG434432-02
Instrument ID: PE-ICP2 Run Date: 06/22/13 08:47 Prep Method: 3015
File ID: P2.062213.084750 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG434983 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-22-JUN-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2941638
02-JUL-2013 08:44

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13060636 Prep Date:06/17/13 13:44 Sample ID:WG434305-02
Instrument ID:PE-ICP2 Run Date:06/22/13 13:34 Prep Method:3015
File ID:P2.062213.133441 Analyst:KHR Method:6010B
Workgroup (AAB#):WG435022 Matrix:Water Units:mg/L
Contract #: Cal ID:PE-ICP-22-JUN-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2941638
02-JUL-2013 08:44

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13060636 Prep Date: 06/23/13 09:17 Sample ID: WG435148-03
Instrument ID: PE-ICP2 Run Date: 06/24/13 14:40 Prep Method: 3015
File ID: P2.062413.144058 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG435260 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-24-JUN-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2941638
02-JUL-2013 08:44

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13060636 Prep Date: 06/21/13 11:10 Sample ID: WG434923-03
Instrument ID: ICP-THERMO2 Run Date: 06/21/13 19:34 Prep Method: 3015
File ID: T2.062113.193409 Analyst: QX Method: 6010B
Workgroup (AAB#): WG434961 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-21-JUN-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2941885
22-JUN-2013 12:19

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/22/2013 Sample ID: WG434432-03
Instrument ID: PE-ICP2 Run Time: 08:50 Prep Method: 3015
File ID: P2.062213.085050 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG434983 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD58415 Cal ID: PE-ICP-22-JUN-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.04	96.6	85 - 115	
Calcium, Total	6.25	6.09	97.4	85 - 115	
Iron, Total	2.50	2.43	97.1	85 - 115	
Magnesium, Total	6.25	6.21	99.4	85 - 115	
Potassium, Total	31.3	30.0	96.1	85 - 115	
Sodium, Total	31.3	30.8	98.6	85 - 115	
Strontium, Total	0.625	0.623	99.7	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2941639
Report generated: 07/02/2013 08:44

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/22/2013 Sample ID: WG434305-03
Instrument ID: PE-ICP2 Run Time: 13:37 Prep Method: 3015
File ID: P2.062213.133741 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG435022 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD58415 Cal ID: PE-ICP-22-JUN-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	5.76	92.2	85 - 115	
Calcium, Total	6.25	6.11	97.8	85 - 115	
Iron, Total	2.50	2.25	90.0	85 - 115	
Magnesium, Total	6.25	5.76	92.1	85 - 115	
Potassium, Total	31.3	28.9	92.4	85 - 115	
Sodium, Total	31.3	30.1	96.3	85 - 115	
Strontium, Total	0.625	0.599	95.8	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2941639
Report generated: 07/02/2013 08:44

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/24/2013 Sample ID: WG435148-04
Instrument ID: PE-ICP2 Run Time: 14:44 Prep Method: 3015
File ID: P2.062413.144400 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG435260 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD58415 Cal ID: PE-ICP-24-JUN-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.00	96.0	85 - 115	
Calcium, Total	6.25	6.07	97.1	85 - 115	
Iron, Total	2.50	2.43	97.3	85 - 115	
Magnesium, Total	6.25	6.31	101	85 - 115	
Potassium, Total	31.3	31.5	101	85 - 115	
Sodium, Total	31.3	31.0	99.3	85 - 115	
Strontium, Total	0.625	0.637	102	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2941639
Report generated: 07/02/2013 08:44

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/21/2013 Sample ID: WG434923-04
Instrument ID: ICP-THERMO2 Run Time: 19:37 Prep Method: 3015
File ID: T2.062113.193740 Analyst: QX Method: 6010B
Workgroup (AAB#): WG434961 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD58415 Cal ID: ICP-TH-21-JUN-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	5.90	94.3	85 - 115	
Calcium, Total	6.25	6.07	97.1	85 - 115	
Iron, Total	2.50	2.30	91.9	85 - 115	
Magnesium, Total	6.25	5.91	94.5	85 - 115	
Potassium, Total	31.3	29.2	93.3	85 - 115	
Sodium, Total	31.3	28.8	92.2	85 - 115	
Strontium, Total	0.625	0.579	92.7	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2941886
Report generated: 06/22/2013 12:19

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13060636 Cal ID:PE-ICP2- 22-JUN-13 Worknum:WG434983

Instrument ID:PE-ICP2 Contract #: Prep Method:3015

Parent ID:L13060636-04 File ID:P2.062213.085854 Dil:1 Method:6010B

Sample ID:L13060636-05 MS File ID:P2.062213.090156 Dil:1 Matrix:Water

Sample ID:L13060636-06 MSD File ID:P2.062213.090401 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.158	6.25	6.53	102	6.25	6.56	102	0.457	80 - 120	20	
Calcium, Total	13.4	6.25	20.3	111	6.25	20.6	116	1.50	80 - 120	20	
Iron, Total	0.450	2.50	3.17	109	2.50	3.18	109	0.400	80 - 120	20	
Magnesium, Total	7.24	6.25	13.6	102	6.25	13.6	101	0.308	80 - 120	20	
Potassium, Total	0.995	31.3	31.0	96.1	31.3	30.7	94.9	1.22	80 - 120	20	
Sodium, Total	84.7	31.3	118	107	31.3	120	113	1.68	80 - 120	20	
Strontium, Total	0.482	0.625	1.12	102	0.625	1.11	100	0.860	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2941640

Report generated 07/02/2013 08:44

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13060636 Cal ID:PE-ICP2- 24-JUN-13 Worknum:WG435260

Instrument ID:PE-ICP2 Contract #: Prep Method:3015

Parent ID:L13060636-16 File ID:P2.062413.144604 Dil:1 Method:6010B

Sample ID:L13060636-17 MS File ID:P2.062413.144905 Dil:1 Matrix:Water

Sample ID:L13060636-18 MSD File ID:P2.062413.145109 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.504	6.25	6.15	90.4	6.25	6.34	93.4	3.05	80 - 120	20	
Calcium, Total	6.02	6.25	12.1	97.4	6.25	12.4	102	2.12	80 - 120	20	
Iron, Total	0.378	2.50	2.63	90	2.50	2.77	95.7	5.26	80 - 120	20	
Magnesium, Total	2.42	6.25	8.23	92.9	6.25	8.77	102	6.35	80 - 120	20	
Potassium, Total	1.05	31.3	31.0	95.9	31.3	32.8	101	5.48	80 - 120	20	
Sodium, Total	31.1	31.3	61.9	98.3	31.3	64.1	105	3.52	80 - 120	20	
Strontium, Total	0.179	0.625	0.789	97.6	0.625	0.808	101	2.35	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2941640

Report generated 07/02/2013 08:44

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13060636 Cal ID: PE-ICP2- Worknum:WG435022
Instrument ID:PE-ICP2 Contract #: Method:6010B
Parent ID:WG434305-01 File ID:P2.062213.144315 Dil:1 Matrix:WATER
Sample ID:WG434305-05 MS File ID:P2.062213.144616 Dil:1 Units:mg/L
Sample ID:WG434305-06 MSD File ID:P2.062213.144821 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum	ND	6.25	5.96	95.3	6.25	6.17	98.7	3.53	80 - 120	20	
Calcium	49.8	6.25	58.2	134	6.25	57.9	129	0.514	80 - 120	20	*
Iron	0.643	2.50	2.97	92.9	2.50	3.02	95.3	1.95	80 - 120	20	
Magnesium	7.85	6.25	13.5	90.6	6.25	13.6	91.8	0.557	80 - 120	20	
Potassium	3.04	31.3	32.2	93.4	31.3	33.1	96.1	2.56	80 - 120	20	
Sodium	6.65	31.3	36.4	95.2	31.3	36.9	96.8	1.40	80 - 120	20	
Strontium	0.198	0.625	0.814	98.5	0.625	0.813	98.4	0.107	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2942131
Report generated 06/24/2013 08:06

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13060636 Cal ID:ICP-THERMO2- Worknum:WG434961
Instrument ID:ICP-THERMO2 Contract #: Method:6010B
Parent ID:WG434923-01 File ID:T2.062113.195108 Dil:1 Matrix:WATER
Sample ID:WG434923-05 MS File ID:T2.062113.195758 Dil:1 Units:mg/L
Sample ID:WG434923-06 MSD File ID:T2.062113.201752 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	3.59	6.25	8.66	81.1	6.25	9.61	96.3	10.4	80 - 120	20	
Calcium, Total	70.8	6.25	76.0	82.1	6.25	74.8	63.7	1.52	80 - 120	20	*
Iron, Total	3.05	2.50	4.71	66.6	2.50	5.44	95.8	14.4	80 - 120	20	*
Magnesium, Total	19.0	6.25	24.9	95.5	6.25	24.7	92.7	0.720	80 - 120	20	
Potassium, Total	2.87	31.3	31.5	91.5	31.3	31.7	92.4	0.858	80 - 120	20	
Sodium, Total	8.27	31.3	37.4	93.3	31.3	37.1	92.3	0.892	80 - 120	20	
Strontium, Total	0.449	0.625	1.03	93.6	0.625	1.02	91.5	1.24	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2941887
Report generated 06/22/2013 12:19

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13060636 Cal ID:ICP-THERMO2- Worknum:WG434961
Instrument ID:ICP-THERMO2 Contract #: Method:6010B
Parent ID:WG434923-02 File ID:T2.062113.195432 Dil:1 Matrix:WATER
Sample ID:WG434923-07 MS File ID:T2.062113.201440 Dil:1 Units:mg/L
Sample ID:WG434923-08 MSD File ID:T2.062113.202104 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Dissolved	ND	6.25	5.95	95.2	6.25	5.93	94.9	0.267	80 - 120	20	
Calcium, Dissolved	67.5	6.25	77.4	157	6.25	75.1	120	3.04	80 - 120	20	*
Iron, Dissolved	ND	2.50	2.28	91.3	2.50	2.31	92.5	1.28	80 - 120	20	
Magnesium, Dissolved	18.0	6.25	24.7	107	6.25	24.4	103	1.21	80 - 120	20	
Potassium, Dissolved	1.77	31.3	31.1	93.8	31.3	31.2	94.0	0.237	80 - 120	20	
Sodium, Dissolved	8.19	31.3	37.8	94.9	31.3	37.4	93.4	1.21	80 - 120	20	
Strontium, Dissolved	0.428	0.625	1.03	96.8	0.625	1.01	93.6	1.97	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2941887
Report generated 06/22/2013 12:19

METHOD BLANK SUMMARY

Login Number: L13060636
Blank File ID: NI.061913.143657
Prep Date: 06/17/13 10:20
Analyzed Date: 06/19/13 14:36
Analyst: JYH

Work Group: WG434443
Blank Sample ID: WG434270-02
Instrument ID: ICP-MS2
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG434270-03	NI.061913.144043	06/19/13 14:40	01
DUP	WG434270-04	NI.061913.144815	06/19/13 14:48	01
MW 2-3	L13060636-20	NI.061913.152214	06/19/13 15:22	01
MW 3-1	L13060636-21	NI.061913.152600	06/19/13 15:26	01
MW 3-1 D	L13060636-22	NI.061913.152946	06/19/13 15:29	01
FIELD BLANK 11 JUNE 2013	L13060636-24	NI.061913.153331	06/19/13 15:33	01
MW 3-2	L13060636-25	NI.061913.153717	06/19/13 15:37	01
MW 3-3	L13060636-26	NI.061913.154103	06/19/13 15:41	01
35BWW04	L13060636-27	NI.061913.160432	06/19/13 16:04	01
35BWW04 D	L13060636-28	NI.061913.160817	06/19/13 16:08	01
MW-58	L13060636-29	NI.061913.161203	06/19/13 16:12	01
35BWW03	L13060636-30	NI.061913.162325	06/19/13 16:23	01
35BWW09	L13060636-31	NI.061913.162711	06/19/13 16:27	01
35BWW05	L13060636-32	NI.061913.163057	06/19/13 16:30	01
MW 3-3	L13060636-26	NI.062013.123151	06/20/13 12:31	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2937085
Report generated 06/25/2013 11:48

METHOD BLANK SUMMARY

Login Number: L13060636
Work Group: WG434808
Blank File ID: NI.062513.095111
Blank Sample ID: WG434409-03
Prep Date: 06/18/13 08:31
Instrument ID: ICP-MS2
Analyzed Date: 06/25/13 09:51
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG434409-04	NI.062513.095458	06/25/13 09:54	01
35BWW14	L13060636-04	NI.062513.095844	06/25/13 09:58	01
35BWW14MS	L13060636-05	NI.062513.100230	06/25/13 10:02	01
35BWW14MSD	L13060636-06	NI.062513.100617	06/25/13 10:06	01
35BWW08	L13060636-01	NI.062513.101003	06/25/13 10:10	01
MW 1-1	L13060636-02	NI.062513.101349	06/25/13 10:13	01
MW 4-1	L13060636-07	NI.062513.103631	06/25/13 10:36	01
MW 4-1 D	L13060636-08	NI.062513.104017	06/25/13 10:40	01
MW 4-2	L13060636-09	NI.062513.104404	06/25/13 10:44	01
FIELD BLANK 7 JUNE 2013	L13060636-10	NI.062513.104750	06/25/13 10:47	01
MW 4-3	L13060636-11	NI.062513.105136	06/25/13 10:51	01
MW 1-2	L13060636-13	NI.062513.105523	06/25/13 10:55	01
FIELD BLANK 10 JUNE 2013	L13060636-15	NI.062513.105910	06/25/13 10:59	01
MW 2-1	L13060636-16	NI.062513.110256	06/25/13 11:02	01
MW 2-1 MS	L13060636-17	NI.062513.110642	06/25/13 11:06	01
MW 2-1 MSD	L13060636-18	NI.062513.111029	06/25/13 11:10	01
MW 2-2	L13060636-19	NI.062513.112153	06/25/13 11:21	01

Report Name: BLANK_SUMMARY
PDF File ID: 2937085
Report generated 06/25/2013 11:48

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13060636 Prep Date: 06/17/13 10:20 Sample ID: WG434270-02
Instrument ID: ICP-MS2 Run Date: 06/19/13 14:36 Prep Method: 3015
File ID: NI.061913.143657 Analyst: JYH Method: 6020
Workgroup (AAB#): WG434443 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-19-JUN-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2937086
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13060636 Prep Date:06/18/13 08:31 Sample ID:WG434409-03
Instrument ID:ICP-MS2 Run Date:06/25/13 09:51 Prep Method:3015
File ID:NI.062513.095111 Analyst:JYH Method:6020
Workgroup (AAB#):WG434808 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-MS-25-JUN-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2937086
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/19/2013 Sample ID: WG434270-03
Instrument ID: ICP-MS2 Run Time: 14:40 Prep Method: 3015
File ID: NI.061913.144043 Analyst: JYH Method: 6020
Workgroup (AAB#): WG434443 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD57131 Cal ID: ICP-MS-19-JUN-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0654	105	80 - 120	
Barium, Total	0.0625	0.0645	103	80 - 120	
Cadmium, Total	0.0625	0.0651	104	80 - 120	
Chromium, Total	0.0625	0.0639	102	80 - 120	
Copper, Total	0.0625	0.0652	104	80 - 120	
Lead, Total	0.0625	0.0651	104	80 - 120	
Manganese, Total	0.0625	0.0627	100	80 - 120	
Nickel, Total	0.0625	0.0638	102	80 - 120	
Selenium, Total	0.0625	0.0670	107	80 - 120	
Thallium, Total	0.0625	0.0633	101	80 - 120	
Vanadium, Total	0.0625	0.0637	102	80 - 120	
Zinc, Total	0.0625	0.0684	109	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2937087
Report generated: 06/25/2013 11:48

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13060636 Run Date: 06/25/2013 Sample ID: WG434409-04
Instrument ID: ICP-MS2 Run Time: 09:54 Prep Method: 3015
File ID: NI.062513.095458 Analyst: JYH Method: 6020
Workgroup (AAB#): WG434808 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD57131 Cal ID: ICP-MS-25-JUN-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0606	97.0	80 - 120	
Barium, Total	0.0625	0.0611	97.7	80 - 120	
Cadmium, Total	0.0625	0.0625	100	80 - 120	
Chromium, Total	0.0625	0.0635	102	80 - 120	
Copper, Total	0.0625	0.0644	103	80 - 120	
Lead, Total	0.0625	0.0626	100	80 - 120	
Manganese, Total	0.0625	0.0635	102	80 - 120	
Nickel, Total	0.0625	0.0628	100	80 - 120	
Selenium, Total	0.0625	0.0629	101	80 - 120	
Thallium, Total	0.0625	0.0616	98.6	80 - 120	
Vanadium, Total	0.0625	0.0626	100	80 - 120	
Zinc, Total	0.0625	0.0630	101	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2937087
Report generated: 06/25/2013 11:48

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13060636 Cal ID: ICP-MS2- 25-JUN-13 Worknum:WG434808

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13060636-04 File ID:NI.062513.095844 Dil:1 Method:6020

Sample ID:L13060636-05 MS File ID:NI.062513.100230 Dil:1 Matrix:Water

Sample ID:L13060636-06 MSD File ID:NI.062513.100617 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0635	102	0.0625	0.0635	102	0.0551	75 - 125	20	
Barium, Total	0.0436	0.0625	0.106	99.8	0.0625	0.108	103	1.83	75 - 125	20	
Cadmium, Total	0.000319	0.0625	0.0651	104	0.0625	0.0658	105	1.06	75 - 125	20	
Chromium, Total	ND	0.0625	0.0649	104	0.0625	0.0634	101	2.35	75 - 125	20	
Copper, Total	0.00117	0.0625	0.0640	100	0.0625	0.0640	101	0.0864	75 - 125	20	
Lead, Total	ND	0.0625	0.0658	105	0.0625	0.0670	107	1.74	75 - 125	20	
Manganese, Total	0.0305	0.0625	0.0979	108	0.0625	0.0966	106	1.31	75 - 125	20	
Nickel, Total	ND	0.0625	0.0655	105	0.0625	0.0653	105	0.326	75 - 125	20	
Selenium, Total	0.00314	0.0625	0.0714	109	0.0625	0.0682	104	4.49	75 - 125	20	
Thallium, Total	ND	0.0625	0.0639	102	0.0625	0.0647	103	1.16	75 - 125	20	
Vanadium, Total	0.00172	0.0625	0.0659	103	0.0625	0.0658	103	0.0308	75 - 125	20	
Zinc, Total	ND	0.0625	0.0667	107	0.0625	0.0669	107	0.289	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2945326

Report generated 06/25/2013 11:48

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13060636 Cal ID: ICP-MS2- 25-JUN-13 Worknum:WG434808

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13060636-16 File ID:NI.062513.110256 Dil:1 Method:6020

Sample ID:L13060636-17 MS File ID:NI.062513.110642 Dil:1 Matrix:Water

Sample ID:L13060636-18 MSD File ID:NI.062513.111029 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0596	95.3	0.0625	0.0616	98.6	3.37	75 - 125	20	
Barium, Total	0.0582	0.0625	0.116	93.2	0.0625	0.116	91.9	0.715	75 - 125	20	
Cadmium, Total	0.000926	0.0625	0.0631	99.4	0.0625	0.0637	100	1.07	75 - 125	20	
Chromium, Total	ND	0.0625	0.0610	97.7	0.0625	0.0618	98.9	1.26	75 - 125	20	
Copper, Total	ND	0.0625	0.0631	101	0.0625	0.0626	100	0.738	75 - 125	20	
Lead, Total	ND	0.0625	0.0649	104	0.0625	0.0659	106	1.59	75 - 125	20	
Manganese, Total	0.0572	0.0625	0.121	102	0.0625	0.122	103	0.528	75 - 125	20	
Nickel, Total	ND	0.0625	0.0636	102	0.0625	0.0631	101	0.835	75 - 125	20	
Selenium, Total	0.00170	0.0625	0.0657	102	0.0625	0.0663	103	0.918	75 - 125	20	
Thallium, Total	ND	0.0625	0.0609	97.4	0.0625	0.0624	99.9	2.52	75 - 125	20	
Vanadium, Total	0.00110	0.0625	0.0625	98.2	0.0625	0.0627	98.6	0.331	75 - 125	20	
Zinc, Total	ND	0.0625	0.0677	108	0.0625	0.0682	109	0.743	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2945326

Report generated 06/25/2013 11:48

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13060636 Cal ID:ICP-MS2- Worknum:WG434443
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:WG434270-01 File ID:NI.061913.144429 Dil:1 Matrix:WATER
Sample ID:WG434270-05 MS File ID:NI.061913.145201 Dil:1 Units:mg/L
Sample ID:WG434270-06 MSD File ID:NI.061913.145547 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	0.00474	0.0625	0.0701	105	0.0625	0.0695	104	0.988	75 - 125	20	
Barium, Total	0.0165	0.0625	0.0796	101	0.0625	0.0790	100	0.706	75 - 125	20	
Cadmium, Total	ND	0.0625	0.0666	107	0.0625	0.0657	105	1.36	75 - 125	20	
Chromium, Total	0.00205	0.0625	0.0641	99.4	0.0625	0.0638	98.8	0.573	75 - 125	20	
Copper, Total	0.00345	0.0625	0.0658	99.7	0.0625	0.0652	98.8	0.832	75 - 125	20	
Lead, Total	ND	0.0625	0.0665	106	0.0625	0.0662	106	0.426	75 - 125	20	
Manganese, Total	0.107	0.0625	0.165	92.4	0.0625	0.162	87.8	1.75	75 - 125	20	
Nickel, Total	0.0124	0.0625	0.0735	97.7	0.0625	0.0731	97.1	0.558	75 - 125	20	
Selenium, Total	0.00111	0.0625	0.0683	108	0.0625	0.0694	109	1.59	75 - 125	20	
Thallium, Total	ND	0.0625	0.0643	103	0.0625	0.0637	102	0.954	75 - 125	20	
Vanadium, Total	ND	0.0625	0.0643	103	0.0625	0.0633	101	1.52	75 - 125	20	
Zinc, Total	0.0228	0.0625	0.0848	99.2	0.0625	0.0886	105	4.39	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2937088
Report generated 06/20/2013 08:29

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
July 22, 2013

001 - BIO-CHEM TESTING WVDEP 220	002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental	ADC - ANTHONY D. CANTER
ADG - APRIL D. GREENE	AJF - AMANDA J. FICKIESEN
AML - TONY M. LONG	AZH - AFTER HOURS
BAF - BRICE A. FENTON	BLG - BRENDA L. GREENWALT
BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES
CLC - CHRYS L. CRAWFORD	CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CRW - CHRISTINA R. WILSON	CSH - CHRIS S. HILL
CTB - CHRIS T. BUCINA	DAK - DEAN A. K
DCM - DAVID C. MERCKLE	DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH	DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON	EDL - ERIN D. LONG
EPT - ETHAN P. TIDD	ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN	HJR - HOLLY J. REED
JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON
JKS - JANE K. SCHAAD	JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES	JYH - JI Y. HU
KDW - KATHRYN D. WELCH	KEB - KATIE E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON
KRB - KAELY R. BECKER	LKN - LINDA K. NEDEFF
LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING
MMB - MAREN M. BEERY	MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE	QX - QIN XU
RAH - ROY A. HALSTEAD	REK - BOB E. KYER
RLB - BOB BUCHANAN	RNP - RICK N. PETTY
RS - ROSEMARY SCOTT	RWC - RODNEY W. CAMPBELL
SAV - SARAH A. VANDENBERG	SEP - SUZANNE J. PAUGH
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF
TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
TPA - TYLER P. AMRINE	VC - VICKI COLLIER
WJB - WILL J. BEASLEY	WTD - WADE T. DELONG
XXX - UNAVAILABLE OR SUBCONTRACT	

Microbac Laboratories Inc.
List of Valid Qualifiers
July 22, 2013

Qualkey: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated value; the analyte concentration was less than the RL/LOQ.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, H1	Not detected; Sample analysis performed past holding time.
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 35787

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LONGHORN ARMY AMMUNITION PLANT

Project ID: 3083.001 / B6490

Sampler (print): CARL JOHNSON JR | Signature: Carl Johnson

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCS	TOTAL METALS	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
35B WW08		X	6-6-2013	1410	GROUNDWATER	4	S	3	1		
MW 1-1		X	6-6-2013	1530	GROUNDWATER	4	S	3	1		
TRIP BLANK 6 JUNE 2013		X	6-6-2013	—	—	2	S	2			
35B WW14		X	6-7-2013	1000	GROUNDWATER	4	S	3	1		
35B WW14 MS		X	6-7-2013	1020	↓	4	S	3	1		
35B WW14 MSD		X	6-7-2013	1030	↓	4	S	3	1		
MW 4-1		X	6-7-2013	1210	↓	4	S	3	1		
MW 4-1 D		X	6-7-2013	1220	↓	4	S	3	1		
MW 4-2		X	6-7-2013	1500	↓	4	S	3	1		
FIELD BLANK 7 JUNE 2013		X	6-7-2013	1540	DI WATER	4	S	3	1		
MW 4-3		X	6-7-2013	1610	GW	4	S	3	1		
TRIP BLANK 7 JUNE 2013		X	6-7-2013	—	—	2	S	2			
MW 1-2		X	6-10-2013	0900	GROUNDWATER	4	S	3	1		
TRIP BLANK 7 JUNE 2013		X	6-10-2013	—	—	2	S	2			
FIELD BLANK 10 JUNE 2013		X	6-10-2013	0850	DI WATER	4	S	3	1		
MW 2-1		X	6-10-2013	1020	GW	4	S	3	1		
MW 2-1 MS		X	6-10-2013	1030	GW	4	S	3	1		
MW 2-1 MSD		X	6-10-2013	1040	GW	4	S	3	1		
MW 2-2		X	6-10-2013	1150	GW	4	S	3	1		
MW 2-3		X	6-10-2013	1345	GW	4	S	3	1		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Carl Johnson	6-12-2013	1300	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)

Microbac OVD
Received: 06/13/2013 11:25
By: BOB BUCHANAN
221000037394
RF Buchanan

Date	Time	Received by: (Signature)

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page _____ of _____

00838231

COC No. A 32958

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LONGHORN ARMY AMMUNITION PLANT

Project ID: 3083,001 | B66490

Sampler (print): CARL JOHNSON JR. | Signature: Carl Johnson

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MW 3-1		X	6-10-2013	1515	GW	4	S	3	1		
MW 3-1 D		X	6-10-2013	1530	GW	4	S	3	1		
TRIP BLANK 11 June 2013		X	6-11-2013	—	—	2	S	2			
FIELD BLANK 11 June 2013		X	6-11-2013	0845	DI WATER	4	S	3	1		
MW 3-2		X	6-11-2013	0900	GW	4	S	3	1		
MW 3-3		X	6-11-2013	1000	GW	4	S	3	1		
35B WW04		X	6-11-2013	1120	GW	4	S	3	1		
35B WW04 D		X	6-11-2013	1130	GW	4	S	3	1		
MW-58		X	6-11-2013	1230	GW	4	S	3	1		
35B WW03		X	6-11-2013	1415	GW	4	S	3	1		
35B WW09		X	6-12-2013	0815	GW	4	S	3	1		
35B WW05		X	6-12-2013	1015	GW	4	S	3	1		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Carl Johnson	6-12-2013	1300					
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:	

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page _____ of _____

00838232

NELAP Addendum - April 25, 2013

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Nitroguanidine
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL KNITRO-C-WUV-VIS

Nitrocellulose

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL HPLCOS-HPLC-UV

Nitroguanidine

OVL KNITRO-C-S/UV-VIS

Nitrocellulose

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L13090607

Gene Fabian
Aberdeen Test Center
US Army Aberdeen Center
Aberdeen Proving Ground, MD 21005

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Kathy Albertson – Team Chemist/Data Specialist
(740) 373-4071
Kathy.Albertson@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on September 30 2013

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: Microbac OVD

Microbac

Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00110947	H	3.0		1015923881660004575000795831004922	X
0018234	H	3.0		1015923881660004575000795831004933	X
00110812	H	2.0		1015923881660004575000795831004911	X
00110817	H	3.0		1002239581660004575000801944416697	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35BWW09	L13090607-01	09/04/2013 09:00	09/12/2013 11:46
35BWW08	L13090607-02	09/04/2013 10:25	09/12/2013 11:46
MW1-1	L13090607-03	09/04/2013 11:30	09/12/2013 11:46
TRIP BLANK4 SEPT 2013	L13090607-04	09/04/2013 12:25	09/12/2013 11:46
FIELD BLANK 4 SEPT 2013	L13090607-05	09/04/2013 12:40	09/12/2013 11:46
MW1-2	L13090607-06	09/04/2013 14:30	09/12/2013 11:46
MW2-1	L13090607-07	09/05/2013 09:30	09/12/2013 11:46
MW2-1 MS	L13090607-08	09/05/2013 09:40	09/12/2013 11:46
MW2-1 MSD	L13090607-09	09/05/2013 09:50	09/12/2013 11:46
MW2-2	L13090607-10	09/05/2013 13:20	09/12/2013 11:46
MW2-3	L13090607-11	09/05/2013 14:45	09/12/2013 11:46
TRIP BLANK 5 SEPT 2013	L13090607-12	09/05/2013 00:01	09/12/2013 11:46
TRIP BLANK 6 SEPT 2013	L13090607-13	09/06/2013 00:01	09/12/2013 11:46
35B WW05	L13090607-14	09/06/2013 09:10	09/12/2013 11:46
MW-58	L13090607-15	09/06/2013 10:15	09/12/2013 11:46
MW3-1	L13090607-16	09/06/2013 13:00	09/12/2013 11:46
MW3-1D	L13090607-17	09/06/2013 13:15	09/12/2013 11:46
MW3-2	L13090607-18	09/06/2013 14:20	09/12/2013 11:46
MW3-3	L13090607-19	09/06/2013 15:40	09/12/2013 11:46
35BWW04	L13090607-20	09/09/2013 08:30	09/12/2013 11:46
35BWW11	L13090607-21	09/09/2013 09:30	09/12/2013 11:46
35BWW07	L13090607-22	09/09/2013 11:15	09/12/2013 11:46
35BWW14	L13090607-23	09/09/2013 13:30	09/12/2013 11:46
35BWW14MS	L13090607-24	09/09/2013 13:45	09/12/2013 11:46
35BWW14MSD	L13090607-25	09/09/2013 13:55	09/12/2013 11:46
TRIP BLANK 9 SEPT 2013	L13090607-26	09/09/2013 00:01	09/12/2013 11:46
FIELD BLANK 9 SEPT 2013	L13090607-27	09/09/2013 14:00	09/12/2013 11:46
MW4-1	L13090607-28	09/10/2013 09:00	09/12/2013 11:46
MW4-1D	L13090607-29	09/10/2013 09:15	09/12/2013 11:46
MW4-2	L13090607-30	09/10/2013 10:15	09/12/2013 11:46
MW4-3	L13090607-31	09/10/2013 11:30	09/12/2013 11:46

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Microbac Laboratories
Case Narrative

Login Number: L13090607
Department: Volatiles
Analyst: Anthony Canter

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: Recoveries out of range were observed for the following analytes: dichlorodifluoromethane, acetone. Please see the applicable QC report for a detailed presentation of the failures.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Recoveries out of range were observed for the following analytes: vinyl acetate. Please see the applicable QC report for a detailed presentation of the failures.

Matrix Spikes: Recoveries out of range were observed for the following analytes: 2-chloroethyl vinyl ether1,1-dichloroethene, 4-chlorotoluene, trichloroethene. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: Recoveries out of range were observed for the following analytes: toluene-d8. Please see the applicable QC report for a detailed presentation of the failures.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 71409
Approved By: Michael Albertson

Microbac Laboratories
Case Narrative

Login Number: L13090607
Department: Metals
Analyst: Kim Rhodes
Analyst #2: Maren Beery

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG445227 - All acceptance criteria were met.

WG445519 - All acceptance criteria were met.

WG446021 - All acceptance criteria were met.

Matrix Spikes: WG445227 - Sample 07 was chosen by the client for MS/MSD analysis. Samples 08(MS) and 09(MSD) met all acceptance criteria.

WG445519 - Sample 23 was chosen by the client for MS/MSD analysis. Samples 24(MS) and 25(MSD) yielded a noncompliant recovery for calcium.

SAMPLES

Samples: WG445227 - Due to time constraints, client samples 01, 02, 03, 05, and 06 were analyzed on a later calibration.

WG446021 - Due to the yellow color of the digestate, sample 21 was analyzed initially at a dilution for all analytes. Due to results that were less than the reporting detection limit, sample 21 was reanalyzed undiluted for aluminum and potassium.

Narrative ID: 71178
Approved By: Sheri Pfalzgraf

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Microbac Laboratories
Case Narrative

Login Number: L13090607
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG445210 - All acceptance criteria were met.

WG445239 - All acceptance criteria were met.

Matrix Spikes: WG445210 - Sample 07 was chosen by the client for MS/MSD analysis. Samples 08(MS) and 09(MSD) yielded noncompliant recoveries for zinc.

WG445239 - Sample 23 was chosen by the client for MS/MSD analysis. Samples 24(MS) and 25(MSD) yielded a noncompliant recovery for zinc.

Samples: WG445239 - Client sample 10 required dilution analysis in order to obtain results for barium and zinc within the linear range. Client samples 28, 29 and 30 required dilution analyses in order to obtain results for manganese within the linear range.

SAMPLES

Narrative ID: 71200
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW09	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/11/2013 14:13
Workgroup #:	WG444664	**Analyst:**	MES	**Run Date:**	09/14/2013 15:08
Collect Date:	09/04/2013 09:00	**Dilution:**	1	**File ID:**	8M390612
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.465	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	53.6		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	112	80	120	
Toluene-d8	106	88	110	
4-Bromofluorobenzene	98.1	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-01 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW09 **Prep Method:** 3015 **Prep Date:** 09/18/2013 13:12
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/25/2013 09:10
Workgroup #: WG445227 **Analyst:** KHR **Run Date:** 09/25/2013 13:09
Collect Date: 09/04/2013 09:00 **Dilution:** 1 **File ID:** P2.092513.130907
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.104	J	0.200	0.100
Calcium, Total	7440-70-2	59.6		0.500	0.250
Iron, Total	7439-89-6	0.198		0.100	0.0500
Magnesium, Total	7439-95-4	33.8		0.500	0.250
Potassium, Total	7440-09-7	2.54		1.00	0.500
Sodium, Total	7440-23-5	171		0.500	0.250
Strontium, Total	7440-24-6	2.04		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-01 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW09 **Prep Method:** 3015 **Prep Date:** 09/17/2013 10:43
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445210 **Analyst:** JYH **Run Date:** 09/19/2013 11:10
Collect Date: 09/04/2013 09:00 **Dilution:** 1 **File ID:** NI.091913.111018
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0619		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00150		0.000600	0.000300
Chromium, Total	7440-47-3	0.00127	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00308		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0367		0.00200	0.00100
Nickel, Total	7440-02-0	0.00328	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00517		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6	0.0137	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35BWW08	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/05/2013 18:52
Workgroup #:	WG444595	**Analyst:**	ADC	**Run Date:**	09/13/2013 18:38
Collect Date:	09/04/2013 10:25	**Dilution:**	1	**File ID:**	9M958140
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.301	J	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	49.6		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	100	80	120	
Toluene-d8	103	88	110	
4-Bromofluorobenzene	98.6	86	115	

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-02 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW08 **Prep Method:** 3015 **Prep Date:** 09/18/2013 13:12
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/25/2013 09:10
Workgroup #: WG445227 **Analyst:** KHR **Run Date:** 09/25/2013 13:12
Collect Date: 09/04/2013 10:25 **Dilution:** 1 **File ID:** P2.092513.131212
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	26.8		0.500	0.250
Iron, Total	7439-89-6	0.0697	J	0.100	0.0500
Magnesium, Total	7439-95-4	15.9		0.500	0.250
Potassium, Total	7440-09-7	1.37		1.00	0.500
Sodium, Total	7440-23-5	132		0.500	0.250
Strontium, Total	7440-24-6	0.992		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-02 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW08 **Prep Method:** 3015 **Prep Date:** 09/17/2013 10:43
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445210 **Analyst:** JYH **Run Date:** 09/19/2013 11:13
Collect Date: 09/04/2013 10:25 **Dilution:** 1 **File ID:** NI.091913.111324
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0463		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000677		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00170	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0127		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0393		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6	0.0151	J	0.0250	0.0125

Microbac

Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13090607-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	MW1-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/05/2013 18:52
Workgroup #:	WG444595	**Analyst:**	ADC	**Run Date:**	09/13/2013 19:08
Collect Date:	09/04/2013 11:30	**Dilution:**	1	**File ID:**	9M958141
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.83		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	110	86	118	
1,2-Dichloroethane-d4	103	80	120	

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Toluene-d8	109	88	110	
4-Bromofluorobenzene	110	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-03 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW1-1 **Prep Method:** 3015 **Prep Date:** 09/18/2013 13:12
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/25/2013 09:10
Workgroup #: WG445227 **Analyst:** KHR **Run Date:** 09/25/2013 13:20
Collect Date: 09/04/2013 11:30 **Dilution:** 1 **File ID:** P2.092513.132024
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	12.8		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	7.52		0.500	0.250
Potassium, Total	7440-09-7	0.827	J	1.00	0.500
Sodium, Total	7440-23-5	96.5		0.500	0.250
Strontium, Total	7440-24-6	0.455		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-03 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW1-1 **Prep Method:** 3015 **Prep Date:** 09/17/2013 10:43
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445210 **Analyst:** JYH **Run Date:** 09/19/2013 11:16
Collect Date: 09/04/2013 11:30 **Dilution:** 1 **File ID:** NI.091913.111628
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0595		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00287		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00788		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00604		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000546	J	0.00100	0.000500

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Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.0131	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-04
Client ID: TRIP BLANK4 SEPT 2013
Matrix: Water
Workgroup #: WG444595
Collect Date: 09/04/2013 12:25
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS9
Prep Date: N/A
Cal Date: 09/05/2013 18:52
Run Date: 09/13/2013 16:40
File ID: 9M958136

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q

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Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	103	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	109	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-05
Client ID: FIELD BLANK 4 SEPT 2013
Matrix: Water
Workgroup #: WG444595
Collect Date: 09/04/2013 12:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS9
Prep Date: N/A
Cal Date: 09/05/2013 18:52
Run Date: 09/13/2013 17:10
File ID: 9M958137

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	4.03	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

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Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	101	80	120	
Toluene-d8	106	88	110	
4-Bromofluorobenzene	102	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-05 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: FIELD BLANK 4 SEPT 2013 **Prep Method:** 3015 **Prep Date:** 09/18/2013 13:12
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/25/2013 09:10
Workgroup #: WG445227 **Analyst:** KHR **Run Date:** 09/25/2013 13:23
Collect Date: 09/04/2013 12:40 **Dilution:** 1 **File ID:** P2.092513.132329
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	0.398	J	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5	0.661		0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-05 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: FIELD BLANK 4 SEPT 2013 **Prep Method:** 3015 **Prep Date:** 09/17/2013 10:43
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445210 **Analyst:** JYH **Run Date:** 09/19/2013 11:19
Collect Date: 09/04/2013 12:40 **Dilution:** 1 **File ID:** NI.091913.111933
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1	0.00168		0.00100	0.000500
Manganese, Total	7439-96-5	0.00317		0.00200	0.00100

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13090607-06	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	MW1-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/05/2013 18:52
Workgroup #:	WG444595	**Analyst:**	ADC	**Run Date:**	09/13/2013 19:37
Collect Date:	09/04/2013 14:30	**Dilution:**	1	**File ID:**	9M958142
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.817	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	109	86	118	
1,2-Dichloroethane-d4	103	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	104	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-06 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW1-2 **Prep Method:** 3015 **Prep Date:** 09/18/2013 13:12
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/25/2013 09:10
Workgroup #: WG445227 **Analyst:** KHR **Run Date:** 09/25/2013 13:26
Collect Date: 09/04/2013 14:30 **Dilution:** 1 **File ID:** P2.092513.132630
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.105	J	0.200	0.100
Calcium, Total	7440-70-2	10.1		0.500	0.250
Iron, Total	7439-89-6	0.111		0.100	0.0500
Magnesium, Total	7439-95-4	5.36		0.500	0.250
Potassium, Total	7440-09-7	1.04		1.00	0.500
Sodium, Total	7440-23-5	98.8		0.500	0.250
Strontium, Total	7440-24-6	0.404		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-06 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW1-2 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 12:59
Collect Date: 09/04/2013 14:30 **Dilution:** 1 **File ID:** NI.091913.125931
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0597		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00239		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00586		0.00200	0.00100

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Analyte	CAS #	Result	Qual	RL	MDL
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0251		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00268		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000690	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-07
Client ID: MW2-1
Matrix: Water
Workgroup #: WG444637
Collect Date: 09/05/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 09/11/2013 14:13
Run Date: 09/13/2013 20:28
File ID: 8M390584

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.67		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.15		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	111	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	102	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-07
Client ID: MW2-1
Matrix: Water
Workgroup #: WG445227
Collect Date: 09/05/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/18/2013 13:12
Cal Date: 09/19/2013 09:00
Run Date: 09/19/2013 11:21
File ID: P2.091913.112141

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.205		0.200	0.100
Calcium, Total	7440-70-2	6.05		0.500	0.250
Iron, Total	7439-89-6	0.243		0.100	0.0500
Magnesium, Total	7439-95-4	2.38		0.500	0.250
Potassium, Total	7440-09-7	1.06		1.00	0.500
Sodium, Total	7440-23-5	31.5		0.500	0.250
Strontium, Total	7440-24-6	0.169		0.0500	0.0250

Sample #: L13090607-07
Client ID: MW2-1
Matrix: Water
Workgroup #: WG445210
Collect Date: 09/05/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 09/17/2013 10:43
Cal Date: 09/19/2013 09:59
Run Date: 09/19/2013 10:36
File ID: NI.091913.103624

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.000695	J	0.00100	0.000500
Barium, Total	7440-39-3	0.0611		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000631		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100

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Analyte	CAS #	Result	Qual	RL	MDL
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.103		0.00200	0.00100
Nickel, Total	7440-02-0	0.00219	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00230		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000755	J	0.00100	0.000500
Zinc, Total	7440-66-6	0.0302		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-08
Client ID: MW2-1 MS
Matrix: Water
Workgroup #: WG444637
Collect Date: 09/05/2013 09:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 09/11/2013 14:13
Run Date: 09/13/2013 17:22
File ID: 8M390578

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	20.1		10.0	2.50
Benzene	71-43-2	20.4		1.00	0.125
Bromobenzene	108-86-1	20.3		1.00	0.125
Bromochloromethane	74-97-5	21.5		1.00	0.200
Bromodichloromethane	75-27-4	20.7		1.00	0.250
Bromoform	75-25-2	21.1		1.00	0.500
Bromomethane	74-83-9	22.0		1.00	0.500
2-Butanone	78-93-3	22.3		10.0	2.50
n-Butylbenzene	104-51-8	21.5		1.00	0.250
sec-Butylbenzene	135-98-8	19.5		1.00	0.250
tert-Butylbenzene	98-06-6	19.5		1.00	0.250
Carbon disulfide	75-15-0	20.5		1.00	0.500
Carbon tetrachloride	56-23-5	21.4		1.00	0.250
Chlorobenzene	108-90-7	18.5		1.00	0.125
Chlorodibromomethane	124-48-1	20.9		1.00	0.250
Chloroethane	75-00-3	20.4		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8	2.62	J	10.0	2.00
Chloroform	67-66-3	20.7		1.00	0.125
Chloromethane	74-87-3	18.7		1.00	0.500
2-Chlorotoluene	95-49-8	19.2		1.00	0.125
4-Chlorotoluene	106-43-4	18.6		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromo-3-chloropropane	96-12-8	20.9		5.00	1.00
1,2-Dibromoethane	106-93-4	21.2		1.00	0.250
Dibromomethane	74-95-3	21.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	19.0		1.00	0.125
1,3-Dichlorobenzene	541-73-1	19.0		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.7		1.00	0.125
Dichlorodifluoromethane	75-71-8	27.4		1.00	0.250
1,1-Dichloroethane	75-34-3	20.0		1.00	0.125
1,2-Dichloroethane	107-06-2	21.8		1.00	0.250
1,1-Dichloroethene	75-35-4	20.3		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	21.7		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	21.2		1.00	0.250
1,2-Dichloropropane	78-87-5	20.6		1.00	0.200
1,3-Dichloropropane	142-28-9	21.4		1.00	0.200
2,2-Dichloropropane	594-20-7	21.6		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	23.3		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	20.7		1.00	0.500
1,1-Dichloropropene	563-58-6	20.7		1.00	0.250
Ethylbenzene	100-41-4	19.7		1.00	0.250
2-Hexanone	591-78-6	21.6		10.0	2.50
Hexachlorobutadiene	87-68-3	19.4		1.00	0.250
Isopropylbenzene	98-82-8	20.8		1.00	0.250
p-Isopropyltoluene	99-87-6	20.2		1.00	0.250
4-Methyl-2-pentanone	108-10-1	21.4		10.0	2.50
Methylene chloride	75-09-2	20.4		5.00	0.250
Naphthalene	91-20-3	22.5		1.00	0.200
n-Propylbenzene	103-65-1	19.8		1.00	0.125
Styrene	100-42-5	22.0		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.3		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	20.5		1.00	0.200
Tetrachloroethene	127-18-4	22.0		1.00	0.250
Toluene	108-88-3	21.0		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.0		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	21.0		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.4		1.00	0.250
1,1,2-Trichloroethane	79-00-5	21.5		1.00	0.250
Trichloroethene	79-01-6	23.9		1.00	0.250
Trichlorofluoromethane	75-69-4	22.4		1.00	0.250
1,2,3-Trichloropropane	96-18-4	21.3		1.00	0.500

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trimethylbenzene	95-63-6	21.5		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	22.8		1.00	0.250
Vinyl acetate	108-05-4	27.1		10.0	2.50
Vinyl chloride	75-01-4	21.0		1.00	0.250
o-Xylene	95-47-6	19.8		1.00	0.250
m-,p-Xylene	179601-23-1	40.7		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	106	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	98.3	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-08
Client ID: MW2-1 MS
Matrix: Water
Workgroup #: WG445227
Collect Date: 09/05/2013 09:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/18/2013 13:12
Cal Date: 09/19/2013 09:00
Run Date: 09/19/2013 11:24
File ID: P2.091913.112443

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.19		0.200	0.100
Calcium, Total	7440-70-2	12.2		0.500	0.250
Iron, Total	7439-89-6	2.58		0.100	0.0500
Magnesium, Total	7439-95-4	8.33		0.500	0.250
Potassium, Total	7440-09-7	30.8		1.00	0.500
Sodium, Total	7440-23-5	63.5		0.500	0.250
Strontium, Total	7440-24-6	0.796		0.0500	0.0250

Sample #: L13090607-08
Client ID: MW2-1 MS
Matrix: Water
Workgroup #: WG445210
Collect Date: 09/05/2013 09:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 09/17/2013 10:43
Cal Date: 09/19/2013 09:59
Run Date: 09/19/2013 10:39
File ID: NI.091913.103928

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0642		0.00100	0.000500
Barium, Total	7440-39-3	0.121		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0636		0.000600	0.000300

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3	0.0631		0.00200	0.00100
Copper, Total	7440-50-8	0.0645		0.00200	0.00100
Lead, Total	7439-92-1	0.0638		0.00100	0.000500
Manganese, Total	7439-96-5	0.161		0.00200	0.00100
Nickel, Total	7440-02-0	0.0641		0.00400	0.00200
Selenium, Total	7782-49-2	0.0658		0.00100	0.000500
Thallium, Total	7440-28-0	0.0643		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0632		0.00100	0.000500
Zinc, Total	7440-66-6	0.0739		0.0250	0.0125

Sample #: L13090607-09
Client ID: MW2-1 MSD
Matrix: Water
Workgroup #: WG444637
Collect Date: 09/05/2013 09:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 09/11/2013 14:13
Run Date: 09/13/2013 17:53
File ID: 8M390579

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	18.9		10.0	2.50
Benzene	71-43-2	20.1		1.00	0.125
Bromobenzene	108-86-1	20.7		1.00	0.125
Bromochloromethane	74-97-5	21.5		1.00	0.200
Bromodichloromethane	75-27-4	20.3		1.00	0.250
Bromoform	75-25-2	20.9		1.00	0.500
Bromomethane	74-83-9	21.5		1.00	0.500
2-Butanone	78-93-3	21.2		10.0	2.50
n-Butylbenzene	104-51-8	21.4		1.00	0.250
sec-Butylbenzene	135-98-8	19.7		1.00	0.250
tert-Butylbenzene	98-06-6	19.4		1.00	0.250
Carbon disulfide	75-15-0	20.4		1.00	0.500
Carbon tetrachloride	56-23-5	21.0		1.00	0.250
Chlorobenzene	108-90-7	18.6		1.00	0.125
Chlorodibromomethane	124-48-1	20.9		1.00	0.250
Chloroethane	75-00-3	19.9		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.4		1.00	0.125
Chloromethane	74-87-3	18.9		1.00	0.500
2-Chlorotoluene	95-49-8	19.7		1.00	0.125
4-Chlorotoluene	106-43-4	18.8		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	20.7		5.00	1.00

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4	20.7		1.00	0.250
Dibromomethane	74-95-3	21.5		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.9		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.8		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.7		1.00	0.125
Dichlorodifluoromethane	75-71-8	27.6		1.00	0.250
1,1-Dichloroethane	75-34-3	19.8		1.00	0.125
1,2-Dichloroethane	107-06-2	21.7		1.00	0.250
1,1-Dichloroethene	75-35-4	20.1		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	21.5		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	21.0		1.00	0.250
1,2-Dichloropropane	78-87-5	21.0		1.00	0.200
1,3-Dichloropropane	142-28-9	20.9		1.00	0.200
2,2-Dichloropropane	594-20-7	20.8		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	23.0		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	20.5		1.00	0.500
1,1-Dichloropropene	563-58-6	20.3		1.00	0.250
Ethylbenzene	100-41-4	19.4		1.00	0.250
2-Hexanone	591-78-6	20.8		10.0	2.50
Hexachlorobutadiene	87-68-3	19.4		1.00	0.250
Isopropylbenzene	98-82-8	20.7		1.00	0.250
p-Isopropyltoluene	99-87-6	20.1		1.00	0.250
4-Methyl-2-pentanone	108-10-1	20.7		10.0	2.50
Methylene chloride	75-09-2	19.9		5.00	0.250
Naphthalene	91-20-3	22.5		1.00	0.200
n-Propylbenzene	103-65-1	20.0		1.00	0.125
Styrene	100-42-5	22.1		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.0		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	20.7		1.00	0.200
Tetrachloroethene	127-18-4	21.5		1.00	0.250
Toluene	108-88-3	20.9		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.0		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	21.0		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.3		1.00	0.250
1,1,2-Trichloroethane	79-00-5	20.9		1.00	0.250
Trichloroethene	79-01-6	24.1		1.00	0.250
Trichlorofluoromethane	75-69-4	22.0		1.00	0.250
1,2,3-Trichloropropane	96-18-4	20.6		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	21.4		1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8	22.7		1.00	0.250
Vinyl acetate	108-05-4	26.8		10.0	2.50
Vinyl chloride	75-01-4	20.8		1.00	0.250
o-Xylene	95-47-6	19.7		1.00	0.250
m-,p-Xylene	179601-23-1	40.8		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	104	80	120	
Toluene-d8	104	88	110	
4-Bromofluorobenzene	98.9	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-09
Client ID: MW2-1 MSD
Matrix: Water
Workgroup #: WG445227
Collect Date: 09/05/2013 09:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/18/2013 13:12
Cal Date: 09/19/2013 09:00
Run Date: 09/19/2013 11:26
File ID: P2.091913.112648

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.49		0.200	0.100
Calcium, Total	7440-70-2	12.7		0.500	0.250
Iron, Total	7439-89-6	2.69		0.100	0.0500
Magnesium, Total	7439-95-4	8.56		0.500	0.250
Potassium, Total	7440-09-7	32.5		1.00	0.500
Sodium, Total	7440-23-5	64.5		0.500	0.250
Strontium, Total	7440-24-6	0.791		0.0500	0.0250

Sample #: L13090607-09
Client ID: MW2-1 MSD
Matrix: Water
Workgroup #: WG445210
Collect Date: 09/05/2013 09:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 09/17/2013 10:43
Cal Date: 09/19/2013 09:59
Run Date: 09/19/2013 10:42
File ID: NI.091913.104233

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0657		0.00100	0.000500
Barium, Total	7440-39-3	0.123		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0654		0.000600	0.000300
Chromium, Total	7440-47-3	0.0658		0.00200	0.00100

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Copper, Total	7440-50-8	0.0660		0.00200	0.00100
Lead, Total	7439-92-1	0.0649		0.00100	0.000500
Manganese, Total	7439-96-5	0.161		0.00200	0.00100
Nickel, Total	7440-02-0	0.0665		0.00400	0.00200
Selenium, Total	7782-49-2	0.0678		0.00100	0.000500
Thallium, Total	7440-28-0	0.0654		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0647		0.00100	0.000500
Zinc, Total	7440-66-6	0.0732		0.0250	0.0125

Sample #: L13090607-10
Client ID: MW2-2
Matrix: Water
Workgroup #: WG444595
Collect Date: 09/05/2013 13:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS9
Prep Date: N/A
Cal Date: 09/05/2013 18:52
Run Date: 09/13/2013 20:07
File ID: 9M958143

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	101	80	120	
Toluene-d8	106	88	110	
4-Bromofluorobenzene	110	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-10
Client ID: MW2-2
Matrix: Water
Workgroup #: WG445227
Collect Date: 09/05/2013 13:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/18/2013 13:12
Cal Date: 09/19/2013 09:00
Run Date: 09/19/2013 11:28
File ID: P2.091913.112853

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	8.02		0.200	0.100
Calcium, Total	7440-70-2	5.21		0.500	0.250
Iron, Total	7439-89-6	21.7		0.100	0.0500
Magnesium, Total	7439-95-4	3.32		0.500	0.250
Potassium, Total	7440-09-7	1.71		1.00	0.500
Sodium, Total	7440-23-5	20.0		0.500	0.250
Strontium, Total	7440-24-6	0.161		0.0500	0.0250

Sample #: L13090607-10
Client ID: MW2-2
Matrix: Water
Workgroup #: WG445239
Collect Date: 09/05/2013 13:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 09/18/2013 08:56
Cal Date: 09/19/2013 09:59
Run Date: 09/19/2013 13:02
File ID: NI.091913.130235

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Cadmium, Total	7440-43-9	0.000383	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.0282		0.00200	0.00100
Copper, Total	7440-50-8	0.0187		0.00200	0.00100
Lead, Total	7439-92-1	0.0168		0.00100	0.000500

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.121		0.00200	0.00100
Nickel, Total	7440-02-0	0.0375		0.00400	0.00200
Selenium, Total	7782-49-2	0.00226		0.00100	0.000500
Thallium, Total	7440-28-0	0.000312		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0515		0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-10
Client ID: MW2-2
Matrix: Water
Workgroup #: WG445239
Collect Date: 09/05/2013 13:20
Sample Tag: DL01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 5
Units: mg/L

Instrument: ICP-MS2
Prep Date: 09/18/2013 08:56
Cal Date: 09/19/2013 09:59
Run Date: 09/19/2013 14:24
File ID: NI.091913.142402

Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.284		0.0150	0.00750
Zinc, Total	7440-66-6	0.275		0.125	0.0625

Sample #: L13090607-11
Client ID: MW2-3
Matrix: Water
Workgroup #: WG444595
Collect Date: 09/05/2013 14:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS9
Prep Date: N/A
Cal Date: 09/05/2013 18:52
Run Date: 09/13/2013 20:37
File ID: 9M958144

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.289	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	110	86	118	
1,2-Dichloroethane-d4	102	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	104	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-11
Client ID: MW2-3
Matrix: Water
Workgroup #: WG445227
Collect Date: 09/05/2013 14:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/18/2013 13:12
Cal Date: 09/25/2013 09:10
Run Date: 09/25/2013 13:29
File ID: P2.092513.132935

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.36		0.200	0.100
Calcium, Total	7440-70-2	1.59		0.500	0.250
Iron, Total	7439-89-6	5.50		0.100	0.0500
Magnesium, Total	7439-95-4	1.15		0.500	0.250
Potassium, Total	7440-09-7	0.900	J	1.00	0.500
Sodium, Total	7440-23-5	19.2		0.500	0.250
Strontium, Total	7440-24-6	0.0535		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-3	**Prep Method:**	3015	**Prep Date:**	09/18/2013 08:56
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	09/19/2013 09:59
Workgroup #:	WG445239	**Analyst:**	JYH	**Run Date:**	09/19/2013 13:05
Collect Date:	09/05/2013 14:45	**Dilution:**	1	**File ID:**	NI.091913.130539
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.100		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000753		0.000600	0.000300
Chromium, Total	7440-47-3	0.00413		0.00200	0.00100
Copper, Total	7440-50-8	0.00393		0.00200	0.00100
Lead, Total	7439-92-1	0.00337		0.00100	0.000500
Manganese, Total	7439-96-5	0.0268		0.00200	0.00100
Nickel, Total	7440-02-0	0.00856		0.00400	0.00200
Selenium, Total	7782-49-2	0.00132		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0102		0.00100	0.000500
Zinc, Total	7440-66-6	0.128		0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13090607-12	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	TRIP BLANK 5 SEPT 2013	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/05/2013 18:52
Workgroup #:	WG444595	**Analyst:**	ADC	**Run Date:**	09/13/2013 17:39
Collect Date:	09/05/2013 00:01	**Dilution:**	1	**File ID:**	9M958138
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	2.70	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	102	80	120	
Toluene-d8	108	88	110	
4-Bromofluorobenzene	108	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-13
Client ID: TRIP BLANK 6 SEPT 2013
Matrix: Water
Workgroup #: WG444595
Collect Date: 09/06/2013 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS9
Prep Date: N/A
Cal Date: 09/05/2013 18:52
Run Date: 09/13/2013 18:09
File ID: 9M958139

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	108	86	118	
1,2-Dichloroethane-d4	103	80	120	
Toluene-d8	110	88	110	
4-Bromofluorobenzene	114	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-14
Client ID: 35B WW05
Matrix: Water
Workgroup #: WG444595
Collect Date: 09/06/2013 09:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS9
Prep Date: N/A
Cal Date: 09/05/2013 18:52
Run Date: 09/13/2013 21:07
File ID: 9M958145

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.377	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.56		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	17.3		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	103	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	105	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-14
Client ID: 35B WW05
Matrix: Water
Workgroup #: WG445227
Collect Date: 09/06/2013 09:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/18/2013 13:12
Cal Date: 09/25/2013 09:10
Run Date: 09/25/2013 13:32
File ID: P2.092513.133237

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.525		0.200	0.100
Calcium, Total	7440-70-2	12.1		0.500	0.250
Iron, Total	7439-89-6	2.71		0.100	0.0500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	6.96		0.500	0.250
Potassium, Total	7440-09-7	0.991	J	1.00	0.500
Sodium, Total	7440-23-5	60.4		0.500	0.250
Strontium, Total	7440-24-6	0.461		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-14 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW05 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:08
Collect Date: 09/06/2013 09:10 **Dilution:** 1 **File ID:** NI.091913.130844
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0549		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000328	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00149	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00190	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000652	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0732		0.00200	0.00100
Nickel, Total	7440-02-0	0.00217	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00169		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00235		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-15 **PrePrep Method:** N/A **Instrument:** HPMS9
Client ID: MW-58 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 09/05/2013 18:52
Workgroup #: WG444595 **Analyst:** ADC **Run Date:** 09/13/2013 21:37
Collect Date: 09/06/2013 10:15 **Dilution:** 1 **File ID:** 9M958146
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.231	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	29.0		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.99		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	108	86	118	
1,2-Dichloroethane-d4	102	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	103	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-15
Client ID: MW-58
Matrix: Water
Workgroup #: WG445227
Collect Date: 09/06/2013 10:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/18/2013 13:12
Cal Date: 09/25/2013 09:10
Run Date: 09/25/2013 13:34
File ID: P2.092513.133441

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.123	J	0.200	0.100
Calcium, Total	7440-70-2	4.31		0.500	0.250
Iron, Total	7439-89-6	0.161		0.100	0.0500
Magnesium, Total	7439-95-4	2.13		0.500	0.250
Potassium, Total	7440-09-7	0.714	J	1.00	0.500
Sodium, Total	7440-23-5	56.8		0.500	0.250
Strontium, Total	7440-24-6	0.118		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-15 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW-58 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:11
Collect Date: 09/06/2013 10:15 **Dilution:** 1 **File ID:** NI.091913.131148
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0720		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000421	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00148	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00119	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00496		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00206		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00115		0.00100	0.000500
Zinc, Total	7440-66-6	0.0130	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-16 **PrePrep Method:** N/A **Instrument:** HPMS9
Client ID: MW3-1 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 09/05/2013 18:52
Workgroup #: WG444595 **Analyst:** ADC **Run Date:** 09/13/2013 22:07
Collect Date: 09/06/2013 13:00 **Dilution:** 1 **File ID:** 9M958147
Sample Tag: 01 **Units:** ug/L

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	18.7		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.05		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	103	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	108	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-16
Client ID: MW3-1
Matrix: Water
Workgroup #: WG445519
Collect Date: 09/06/2013 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: MMB
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/20/2013 13:47
Cal Date: 09/22/2013 12:31
Run Date: 09/22/2013 15:38
File ID: P2.092213.153830

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.136	J	0.200	0.100
Calcium, Total	7440-70-2	17.9		0.500	0.250
Iron, Total	7439-89-6	0.144		0.100	0.0500
Magnesium, Total	7439-95-4	6.19		0.500	0.250
Potassium, Total	7440-09-7	7.81		1.00	0.500
Sodium, Total	7440-23-5	85.1		0.500	0.250
Strontium, Total	7440-24-6	1.42		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-16 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW3-1 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:14
Collect Date: 09/06/2013 13:00 **Dilution:** 1 **File ID:** NI.091913.131452
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.102		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1	0.000525	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0524		0.00200	0.00100
Nickel, Total	7440-02-0	0.00301	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00140		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0103		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-17 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: MW3-1D **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 09/11/2013 14:13
Workgroup #: WG444637 **Analyst:** TMB **Run Date:** 09/13/2013 22:01
Collect Date: 09/06/2013 13:15 **Dilution:** 1 **File ID:** 8M390587
Sample Tag: 01 **Units:** ug/L

Microbac

Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	19.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.10		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	108	86	118	
1,2-Dichloroethane-d4	112	80	120	
Toluene-d8	106	88	110	
4-Bromofluorobenzene	101	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-17
Client ID: MW3-1D
Matrix: Water
Workgroup #: WG445519
Collect Date: 09/06/2013 13:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: MMB
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/20/2013 13:47
Cal Date: 09/22/2013 12:31
Run Date: 09/22/2013 15:46
File ID: P2.092213.154642

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.126	J	0.200	0.100
Calcium, Total	7440-70-2	18.1		0.500	0.250
Iron, Total	7439-89-6	0.149		0.100	0.0500
Magnesium, Total	7439-95-4	6.29		0.500	0.250
Potassium, Total	7440-09-7	7.33		1.00	0.500
Sodium, Total	7440-23-5	81.4		0.500	0.250
Strontium, Total	7440-24-6	1.39		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-17 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW3-1D **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:17
Collect Date: 09/06/2013 13:15 **Dilution:** 1 **File ID:** NI.091913.131757
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0969		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0511		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.000803	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00903		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-18 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: MW3-2 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 09/11/2013 14:13
Workgroup #: WG444637 **Analyst:** TMB **Run Date:** 09/13/2013 22:32
Collect Date: 09/06/2013 14:20 **Dilution:** 1 **File ID:** 8M390588
Sample Tag: 01 **Units:** ug/L

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.222	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.611	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	40.1		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.02		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	108	86	118	
1,2-Dichloroethane-d4	112	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	100	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-18	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MW3-2	**Prep Method:**	3015	**Prep Date:**	09/20/2013 13:47
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	09/22/2013 12:31
Workgroup #:	WG445519	**Analyst:**	MMB	**Run Date:**	09/22/2013 15:49
Collect Date:	09/06/2013 14:20	**Dilution:**	1	**File ID:**	P2.092213.154947
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	8.06		0.500	0.250
Iron, Total	7439-89-6	0.173		0.100	0.0500
Magnesium, Total	7439-95-4	4.24		0.500	0.250
Potassium, Total	7440-09-7	0.925	J	1.00	0.500
Sodium, Total	7440-23-5	24.6		0.500	0.250
Strontium, Total	7440-24-6	0.260		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13090607-18	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW3-2	**Prep Method:**	3015	**Prep Date:**	09/18/2013 08:56
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	09/19/2013 09:59
Workgroup #:	WG445239	**Analyst:**	JYH	**Run Date:**	09/19/2013 13:21
Collect Date:	09/06/2013 14:20	**Dilution:**	1	**File ID:**	NI.091913.132101
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.124		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000746		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1	0.000748	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0340		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00157		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00140		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-19	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW3-3	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/11/2013 14:13
Workgroup #:	WG444637	**Analyst:**	TMB	**Run Date:**	09/13/2013 23:03
Collect Date:	09/06/2013 15:40	**Dilution:**	1	**File ID:**	8M390589
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.251	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.383	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	36.2		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.50		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	109	80	120	
Toluene-d8	103	88	110	
4-Bromofluorobenzene	100	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-19 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW3-3 **Prep Method:** 3015 **Prep Date:** 09/20/2013 13:47
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/22/2013 12:31
Workgroup #: WG445519 **Analyst:** MMB **Run Date:** 09/22/2013 15:52
Collect Date: 09/06/2013 15:40 **Dilution:** 1 **File ID:** P2.092213.155247
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.18		0.200	0.100
Calcium, Total	7440-70-2	4.35		0.500	0.250
Iron, Total	7439-89-6	2.95		0.100	0.0500
Magnesium, Total	7439-95-4	1.92		0.500	0.250
Potassium, Total	7440-09-7	1.19		1.00	0.500
Sodium, Total	7440-23-5	54.4		0.500	0.250
Strontium, Total	7440-24-6	0.127		0.0500	0.0250

Sample #: L13090607-19 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW3-3 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:24
Collect Date: 09/06/2013 15:40 **Dilution:** 1 **File ID:** NI.091913.132405
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.117		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.0279		0.00200	0.00100
Copper, Total	7440-50-8	0.00424		0.00200	0.00100
Lead, Total	7439-92-1	0.00405		0.00100	0.000500
Manganese, Total	7439-96-5	0.0893		0.00200	0.00100
Nickel, Total	7440-02-0	0.00971		0.00400	0.00200
Selenium, Total	7782-49-2	0.00370		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0168		0.00100	0.000500
Zinc, Total	7440-66-6	0.101		0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-20	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW04	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/11/2013 14:13
Workgroup #:	WG444637	**Analyst:**	TMB	**Run Date:**	09/13/2013 23:34
Collect Date:	09/09/2013 08:30	**Dilution:**	1	**File ID:**	8M390590
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2	0.168	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.158	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.143	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	1.37		1.00	0.125
1,2-Dichloroethane	107-06-2	0.393	J	1.00	0.250
1,1-Dichloroethene	75-35-4	2.25		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.749	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	68.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	13.4		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	109	86	118	
1,2-Dichloroethane-d4	112	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	99.0	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-20 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW04 **Prep Method:** 3015 **Prep Date:** 09/20/2013 13:47
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/22/2013 12:31
Workgroup #: WG445519 **Analyst:** MMB **Run Date:** 09/22/2013 15:55
Collect Date: 09/09/2013 08:30 **Dilution:** 1 **File ID:** P2.092213.155547
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.171	J	0.200	0.100
Calcium, Total	7440-70-2	8.57		0.500	0.250
Iron, Total	7439-89-6	0.472		0.100	0.0500
Magnesium, Total	7439-95-4	4.47		0.500	0.250
Potassium, Total	7440-09-7	0.841	J	1.00	0.500
Sodium, Total	7440-23-5	59.7		0.500	0.250
Strontium, Total	7440-24-6	0.280		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-20 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW04 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:27
Collect Date: 09/09/2013 08:30 **Dilution:** 1 **File ID:** NI.091913.132710
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0680		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00106		0.000600	0.000300
Chromium, Total	7440-47-3	0.00101	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00185	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00250		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00183		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00192		0.00100	0.000500
Zinc, Total	7440-66-6	0.0145	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-21	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW11	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/11/2013 14:13
Workgroup #:	WG444637	**Analyst:**	TMB	**Run Date:**	09/14/2013 02:39
Collect Date:	09/09/2013 09:30	**Dilution:**	1	**File ID:**	8M390596
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2	0.141	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	110	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	95.8	86	115	

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-21 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW11 **Prep Method:** 3015 **Prep Date:** 09/24/2013 07:41
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/29/2013 09:50
Workgroup #: WG446021 **Analyst:** KHR **Run Date:** 09/29/2013 12:56
Collect Date: 09/09/2013 09:30 **Dilution:** 1 **File ID:** P2.092913.125614
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Potassium, Total	7440-09-7	1.83		1.00	0.500

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-21 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW11 **Prep Method:** 3015 **Prep Date:** 09/24/2013 07:41
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/26/2013 08:44
Workgroup #: WG446021 **Analyst:** KHR **Run Date:** 09/26/2013 16:00
Collect Date: 09/09/2013 09:30 **Dilution:** 2 **File ID:** P2.092613.160036
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	34.1		1.00	0.500
Iron, Total	7439-89-6	2.02		0.200	0.100
Magnesium, Total	7439-95-4	20.6		1.00	0.500
Sodium, Total	7440-23-5	108		1.00	0.500
Strontium, Total	7440-24-6	0.960		0.100	0.0500

Sample #: L13090607-21 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW11 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:36
Collect Date: 09/09/2013 09:30 **Dilution:** 1 **File ID:** NI.091913.133627
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0742		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000843		0.000600	0.000300
Chromium, Total	7440-47-3	0.00154	J	0.00200	0.00100

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Lab Report #: L13090607
Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Copper, Total	7440-50-8	0.00465		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.132		0.00200	0.00100
Nickel, Total	7440-02-0	0.0103		0.00400	0.00200
Selenium, Total	7782-49-2	0.00326		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00113		0.00100	0.000500
Zinc, Total	7440-66-6	0.0494		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-22
Client ID: 35BWW07
Matrix: Water
Workgroup #: WG444637
Collect Date: 09/09/2013 11:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 09/11/2013 14:13
Run Date: 09/14/2013 02:09
File ID: 8M390595

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	110	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	96.8	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-22
Client ID: 35BWW07
Matrix: Water
Workgroup #: WG446021
Collect Date: 09/09/2013 11:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/24/2013 07:41
Cal Date: 09/26/2013 08:44
Run Date: 09/26/2013 16:02
File ID: P2.092613.160241

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.166	J	0.200	0.100
Calcium, Total	7440-70-2	52.1		0.500	0.250
Iron, Total	7439-89-6	0.156		0.100	0.0500
Magnesium, Total	7439-95-4	29.4		0.500	0.250
Potassium, Total	7440-09-7	1.75		1.00	0.500
Sodium, Total	7440-23-5	137		0.500	0.250
Strontium, Total	7440-24-6	1.30		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-22
Client ID: 35BWW07
Matrix: Water
Workgroup #: WG445239
Collect Date: 09/09/2013 11:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 09/18/2013 08:56
Cal Date: 09/19/2013 09:59
Run Date: 09/19/2013 13:39
File ID: NI.091913.133932

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.100		0.00300	0.00150

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Cadmium, Total	7440-43-9	0.000424	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00113	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0149		0.00200	0.00100
Nickel, Total	7440-02-0	0.00345	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00577		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6	0.0184	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-23
Client ID: 35BWW14
Matrix: Water
Workgroup #: WG444805
Collect Date: 09/09/2013 13:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS9
Prep Date: N/A
Cal Date: 09/05/2013 18:52
Run Date: 09/16/2013 17:07
File ID: 9M958169

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2	0.223	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.231	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.166	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	4.88		1.00	0.125
1,2-Dichloroethane	107-06-2	0.312	J	1.00	0.250
1,1-Dichloroethene	75-35-4	52.8		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	13.7		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	0.514	J	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	26.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	89.7		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4	3.81		1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	97.6	80	120	
Toluene-d8	106	88	110	
4-Bromofluorobenzene	99.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-23
Client ID: 35BWW14
Matrix: Water
Workgroup #: WG445519
Collect Date: 09/09/2013 13:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: MMB
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/20/2013 13:47
Cal Date: 09/22/2013 12:31
Run Date: 09/22/2013 15:58
File ID: P2.092213.155848

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	12.7		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	6.76		0.500	0.250
Potassium, Total	7440-09-7	0.914	J	1.00	0.500
Sodium, Total	7440-23-5	83.4		0.500	0.250
Strontium, Total	7440-24-6	0.456		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L13090607-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14	**Prep Method:**	3015	**Prep Date:**	09/18/2013 08:56
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	09/19/2013 09:59
Workgroup #:	WG445239	**Analyst:**	JYH	**Run Date:**	09/19/2013 12:31
Collect Date:	09/09/2013 13:30	**Dilution:**	1	**File ID:**	NI.091913.123146
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0454		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00137	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0319		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00163		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000515	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13090607-24	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35BWW14MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/05/2013 18:52
Workgroup #:	WG444805	**Analyst:**	ADC	**Run Date:**	09/16/2013 15:39
Collect Date:	09/09/2013 13:45	**Dilution:**	1	**File ID:**	9M958166
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	13.8		10.0	2.50
Benzene	71-43-2	19.3		1.00	0.125
Bromobenzene	108-86-1	19.7		1.00	0.125
Bromochloromethane	74-97-5	19.4		1.00	0.200
Bromodichloromethane	75-27-4	19.1		1.00	0.250
Bromoform	75-25-2	19.3		1.00	0.500
Bromomethane	74-83-9	17.4		1.00	0.500
2-Butanone	78-93-3	17.3		10.0	2.50
n-Butylbenzene	104-51-8	22.0		1.00	0.250
sec-Butylbenzene	135-98-8	20.0		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6	18.9		1.00	0.250
Carbon disulfide	75-15-0	19.1		1.00	0.500
Carbon tetrachloride	56-23-5	19.5		1.00	0.250
Chlorobenzene	108-90-7	18.8		1.00	0.125
Chlorodibromomethane	124-48-1	21.0		1.00	0.250
Chloroethane	75-00-3	17.3		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8	5.71	J	10.0	2.00
Chloroform	67-66-3	19.6		1.00	0.125
Chloromethane	74-87-3	14.1		1.00	0.500
2-Chlorotoluene	95-49-8	20.8		1.00	0.125
4-Chlorotoluene	106-43-4	16.9		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	19.7		5.00	1.00
1,2-Dibromoethane	106-93-4	19.6		1.00	0.250
Dibromomethane	74-95-3	20.1		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.8		1.00	0.125
1,3-Dichlorobenzene	541-73-1	19.2		1.00	0.250
1,4-Dichlorobenzene	106-46-7	20.6		1.00	0.125
Dichlorodifluoromethane	75-71-8	12.2		1.00	0.250
1,1-Dichloroethane	75-34-3	22.8		1.00	0.125
1,2-Dichloroethane	107-06-2	19.4		1.00	0.250
1,1-Dichloroethene	75-35-4	60.8		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	31.7		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	19.3		1.00	0.250
1,2-Dichloropropane	78-87-5	19.7		1.00	0.200
1,3-Dichloropropane	142-28-9	19.5		1.00	0.200
2,2-Dichloropropane	594-20-7	19.6		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.6		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	19.5		1.00	0.500
1,1-Dichloropropene	563-58-6	19.0		1.00	0.250
Ethylbenzene	100-41-4	19.3		1.00	0.250
2-Hexanone	591-78-6	17.2		10.0	2.50
Hexachlorobutadiene	87-68-3	21.7		1.00	0.250
Isopropylbenzene	98-82-8	19.3		1.00	0.250
p-Isopropyltoluene	99-87-6	20.6		1.00	0.250
4-Methyl-2-pentanone	108-10-1	17.2		10.0	2.50
Methylene chloride	75-09-2	18.8		5.00	0.250
Naphthalene	91-20-3	21.2		1.00	0.200
n-Propylbenzene	103-65-1	18.9		1.00	0.125
Styrene	100-42-5	20.6		1.00	0.125

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6	20.4		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	21.5		1.00	0.200
Tetrachloroethene	127-18-4	43.9		1.00	0.250
Toluene	108-88-3	20.5		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	20.7		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	20.6		1.00	0.200
1,1,1-Trichloroethane	71-55-6	19.4		1.00	0.250
1,1,2-Trichloroethane	79-00-5	20.0		1.00	0.250
Trichloroethene	79-01-6	94.6		1.00	0.250
Trichlorofluoromethane	75-69-4	19.5		1.00	0.250
1,2,3-Trichloropropane	96-18-4	20.1		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	22.0		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	22.0		1.00	0.250
Vinyl acetate	108-05-4	27.5		10.0	2.50
Vinyl chloride	75-01-4	19.3		1.00	0.250
o-Xylene	95-47-6	18.2		1.00	0.250
m-,p-Xylene	179601-23-1	39.4		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	108	86	118	
1,2-Dichloroethane-d4	99.5	80	120	
Toluene-d8	108	88	110	
4-Bromofluorobenzene	102	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-24
Client ID: 35BWW14MS
Matrix: Water
Workgroup #: WG445519
Collect Date: 09/09/2013 13:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: MMB
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/20/2013 13:47
Cal Date: 09/22/2013 12:31
Run Date: 09/22/2013 16:01
File ID: P2.092213.160152

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	5.80		0.200	0.100
Calcium, Total	7440-70-2	19.5		0.500	0.250
Iron, Total	7439-89-6	2.42		0.100	0.0500
Magnesium, Total	7439-95-4	12.8		0.500	0.250
Potassium, Total	7440-09-7	30.3		1.00	0.500
Sodium, Total	7440-23-5	113		0.500	0.250
Strontium, Total	7440-24-6	1.07		0.0500	0.0250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14MS	**Prep Method:**	3015	**Prep Date:**	09/18/2013 08:56
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	09/19/2013 09:59
Workgroup #:	WG445239	**Analyst:**	JYH	**Run Date:**	09/19/2013 12:34
Collect Date:	09/09/2013 13:45	**Dilution:**	1	**File ID:**	NI.091913.123450
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0693		0.00100	0.000500
Barium, Total	7440-39-3	0.112		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0657		0.000600	0.000300
Chromium, Total	7440-47-3	0.0639		0.00200	0.00100
Copper, Total	7440-50-8	0.0665		0.00200	0.00100
Lead, Total	7439-92-1	0.0674		0.00100	0.000500
Manganese, Total	7439-96-5	0.0953		0.00200	0.00100
Nickel, Total	7440-02-0	0.0663		0.00400	0.00200
Selenium, Total	7782-49-2	0.0720		0.00100	0.000500
Thallium, Total	7440-28-0	0.0684		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0652		0.00100	0.000500
Zinc, Total	7440-66-6	0.0791		0.0250	0.0125

Sample #:	L13090607-25	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35BWW14MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/05/2013 18:52
Workgroup #:	WG444805	**Analyst:**	ADC	**Run Date:**	09/16/2013 16:08
Collect Date:	09/09/2013 13:55	**Dilution:**	1	**File ID:**	9M958167
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	14.5		10.0	2.50
Benzene	71-43-2	21.0		1.00	0.125
Bromobenzene	108-86-1	21.9		1.00	0.125
Bromochloromethane	74-97-5	21.8		1.00	0.200
Bromodichloromethane	75-27-4	21.2		1.00	0.250
Bromoform	75-25-2	21.6		1.00	0.500
Bromomethane	74-83-9	17.8		1.00	0.500
2-Butanone	78-93-3	19.8		10.0	2.50
n-Butylbenzene	104-51-8	23.8		1.00	0.250
sec-Butylbenzene	135-98-8	21.5		1.00	0.250
tert-Butylbenzene	98-06-6	20.4		1.00	0.250
Carbon disulfide	75-15-0	20.8		1.00	0.500

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Carbon tetrachloride	56-23-5	20.9		1.00	0.250
Chlorobenzene	108-90-7	20.3		1.00	0.125
Chlorodibromomethane	124-48-1	22.9		1.00	0.250
Chloroethane	75-00-3	18.7		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	21.2		1.00	0.125
Chloromethane	74-87-3	14.8		1.00	0.500
2-Chlorotoluene	95-49-8	19.7		1.00	0.125
4-Chlorotoluene	106-43-4	21.7		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	22.7		5.00	1.00
1,2-Dibromoethane	106-93-4	21.8		1.00	0.250
Dibromomethane	74-95-3	22.5		1.00	0.250
1,2-Dichlorobenzene	95-50-1	21.0		1.00	0.125
1,3-Dichlorobenzene	541-73-1	20.8		1.00	0.250
1,4-Dichlorobenzene	106-46-7	21.9		1.00	0.125
Dichlorodifluoromethane	75-71-8	12.9		1.00	0.250
1,1-Dichloroethane	75-34-3	24.6		1.00	0.125
1,2-Dichloroethane	107-06-2	21.6		1.00	0.250
1,1-Dichloroethene	75-35-4	66.8		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	34.5		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	20.7		1.00	0.250
1,2-Dichloropropane	78-87-5	21.4		1.00	0.200
1,3-Dichloropropane	142-28-9	21.7		1.00	0.200
2,2-Dichloropropane	594-20-7	21.6		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	22.7		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	21.6		1.00	0.500
1,1-Dichloropropene	563-58-6	20.6		1.00	0.250
Ethylbenzene	100-41-4	21.1		1.00	0.250
2-Hexanone	591-78-6	20.5		10.0	2.50
Hexachlorobutadiene	87-68-3	23.1		1.00	0.250
Isopropylbenzene	98-82-8	21.1		1.00	0.250
p-Isopropyltoluene	99-87-6	22.4		1.00	0.250
4-Methyl-2-pentanone	108-10-1	20.0		10.0	2.50
Methylene chloride	75-09-2	20.4		5.00	0.250
Naphthalene	91-20-3	24.1		1.00	0.200
n-Propylbenzene	103-65-1	20.5		1.00	0.125
Styrene	100-42-5	22.4		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	22.2		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	24.6		1.00	0.200

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	48.1		1.00	0.250
Toluene	108-88-3	22.4		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	23.1		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	22.6		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.4		1.00	0.250
1,1,2-Trichloroethane	79-00-5	22.2		1.00	0.250
Trichloroethene	79-01-6	104		1.00	0.250
Trichlorofluoromethane	75-69-4	20.9		1.00	0.250
1,2,3-Trichloropropane	96-18-4	22.8		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	23.8		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	24.0		1.00	0.250
Vinyl acetate	108-05-4	28.6		10.0	2.50
Vinyl chloride	75-01-4	20.4		1.00	0.250
o-Xylene	95-47-6	19.6		1.00	0.250
m-,p-Xylene	179601-23-1	42.8		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	115	86	118	
1,2-Dichloroethane-d4	103	80	120	
Toluene-d8	114	88	110	*
4-Bromofluorobenzene	108	86	115	

*	Surrogate or spike compound out of range
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-25
Client ID: 35BWW14MSD
Matrix: Water
Workgroup #: WG445519
Collect Date: 09/09/2013 13:55
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: MMB
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/20/2013 13:47
Cal Date: 09/22/2013 12:31
Run Date: 09/22/2013 16:03
File ID: P2.092213.160357

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.10		0.200	0.100
Calcium, Total	7440-70-2	20.6		0.500	0.250
Iron, Total	7439-89-6	2.49		0.100	0.0500
Magnesium, Total	7439-95-4	13.5		0.500	0.250
Potassium, Total	7440-09-7	31.5		1.00	0.500
Sodium, Total	7440-23-5	116		0.500	0.250
Strontium, Total	7440-24-6	1.11		0.0500	0.0250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14MSD	**Prep Method:**	3015	**Prep Date:**	09/18/2013 08:56
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	09/19/2013 09:59
Workgroup #:	WG445239	**Analyst:**	JYH	**Run Date:**	09/19/2013 12:37
Collect Date:	09/09/2013 13:55	**Dilution:**	1	**File ID:**	NI.091913.123755
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0688		0.00100	0.000500
Barium, Total	7440-39-3	0.110		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0655		0.000600	0.000300
Chromium, Total	7440-47-3	0.0623		0.00200	0.00100
Copper, Total	7440-50-8	0.0658		0.00200	0.00100
Lead, Total	7439-92-1	0.0670		0.00100	0.000500
Manganese, Total	7439-96-5	0.0938		0.00200	0.00100
Nickel, Total	7440-02-0	0.0644		0.00400	0.00200
Selenium, Total	7782-49-2	0.0707		0.00100	0.000500
Thallium, Total	7440-28-0	0.0682		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0651		0.00100	0.000500
Zinc, Total	7440-66-6	0.0767		0.0250	0.0125

Sample #:	L13090607-26	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	TRIP BLANK 9 SEPT 2013	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/11/2013 14:13
Workgroup #:	WG444637	**Analyst:**	TMB	**Run Date:**	09/13/2013 18:24
Collect Date:	09/09/2013 00:01	**Dilution:**	1	**File ID:**	8M390580
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	2.54	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	106	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	99.8	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-27
Client ID: FIELD BLANK 9 SEPT 2013
Matrix: Water
Workgroup #: WG444637
Collect Date: 09/09/2013 14:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 09/11/2013 14:13
Run Date: 09/13/2013 21:30
File ID: 8M390586

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	5.04	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125

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Lab Report #: L13090607
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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	108	80	120	
Toluene-d8	104	88	110	
4-Bromofluorobenzene	98.1	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-27
Client ID: FIELD BLANK 9 SEPT 2013
Matrix: Water
Workgroup #: WG446021
Collect Date: 09/09/2013 14:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/24/2013 07:41
Cal Date: 09/26/2013 08:44
Run Date: 09/26/2013 16:05
File ID: P2.092613.160546

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5	0.438	J	0.500	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Strontium, Total	7440-24-6		ND	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-27 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: FIELD BLANK 9 SEPT 2013 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:42
Collect Date: 09/09/2013 14:00 **Dilution:** 1 **File ID:** NI.091913.134236
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00142	J	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-28 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: MW4-1 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 09/11/2013 14:13
Workgroup #: WG444637 **Analyst:** TMB **Run Date:** 09/14/2013 00:05
Collect Date: 09/10/2013 09:00 **Dilution:** 1 **File ID:** 8M390591
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.148	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.863	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.452	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	24.9		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.48		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	108	86	118	
1,2-Dichloroethane-d4	113	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	100	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-28
Client ID: MW4-1
Matrix: Water
Workgroup #: WG446021
Collect Date: 09/10/2013 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/24/2013 07:41
Cal Date: 09/26/2013 08:44
Run Date: 09/26/2013 16:08
File ID: P2.092613.160848

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.101	J	0.200	0.100
Calcium, Total	7440-70-2	19.4		0.500	0.250

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Iron, Total	7439-89-6	0.320		0.100	0.0500
Magnesium, Total	7439-95-4	8.82		0.500	0.250
Potassium, Total	7440-09-7	1.86		1.00	0.500
Sodium, Total	7440-23-5	111		0.500	0.250
Strontium, Total	7440-24-6	0.588		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-28 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW4-1 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:45
Collect Date: 09/10/2013 09:00 **Dilution:** 1 **File ID:** NI.091913.134540
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0522		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00104	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0	0.00308	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00128		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000714	J	0.00100	0.000500
Zinc, Total	7440-66-6	0.0133	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-28 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW4-1 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 14:14
Collect Date: 09/10/2013 09:00 **Dilution:** 25 **File ID:** NI.091913.141416
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.535		0.0500	0.0250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-29	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW4-1D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/11/2013 14:13
Workgroup #:	WG444637	**Analyst:**	TMB	**Run Date:**	09/14/2013 00:36
Collect Date:	09/10/2013 09:15	**Dilution:**	1	**File ID:**	8M390592
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.161	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.297	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.878	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.471	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	25.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.48		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	108	86	118	
1,2-Dichloroethane-d4	110	80	120	
Toluene-d8	103	88	110	
4-Bromofluorobenzene	96.9	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-29 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW4-1D **Prep Method:** 3015 **Prep Date:** 09/24/2013 07:41
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 09/26/2013 08:44
Workgroup #: WG446021 **Analyst:** KHR **Run Date:** 09/26/2013 16:11
Collect Date: 09/10/2013 09:15 **Dilution:** 1 **File ID:** P2.092613.161153
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.136	J	0.200	0.100
Calcium, Total	7440-70-2	19.7		0.500	0.250
Iron, Total	7439-89-6	0.328		0.100	0.0500
Magnesium, Total	7439-95-4	9.06		0.500	0.250
Potassium, Total	7440-09-7	1.95		1.00	0.500
Sodium, Total	7440-23-5	115		0.500	0.250
Strontium, Total	7440-24-6	0.612		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-29 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW4-1D **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 13:48
Collect Date: 09/10/2013 09:15 **Dilution:** 1 **File ID:** NI.091913.134845
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0493		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0	0.00269	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00143		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000635	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13090607-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW4-1D	**Prep Method:**	3015	**Prep Date:**	09/18/2013 08:56
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	09/19/2013 09:59
Workgroup #:	WG445239	**Analyst:**	JYH	**Run Date:**	09/19/2013 14:27
Collect Date:	09/10/2013 09:15	**Dilution:**	25	**File ID:**	NI.091913.142706
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.445		0.0500	0.0250

Sample #:	L13090607-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW4-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	09/11/2013 14:13
Workgroup #:	WG444637	**Analyst:**	TMB	**Run Date:**	09/14/2013 01:07
Collect Date:	09/10/2013 10:15	**Dilution:**	1	**File ID:**	8M390593
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.153	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.379	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	2.76		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.621	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	8.76		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	6.14		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	109	80	120	
Toluene-d8	104	88	110	
4-Bromofluorobenzene	97.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-30
Client ID: MW4-2
Matrix: Water
Workgroup #: WG446021
Collect Date: 09/10/2013 10:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/24/2013 07:41
Cal Date: 09/26/2013 08:44
Run Date: 09/26/2013 16:14
File ID: P2.092613.161458

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	8.23		0.500	0.250
Iron, Total	7439-89-6	0.0828	J	0.100	0.0500
Magnesium, Total	7439-95-4	4.65		0.500	0.250
Potassium, Total	7440-09-7	1.07		1.00	0.500
Sodium, Total	7440-23-5	87.3		0.500	0.250
Strontium, Total	7440-24-6	0.261		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-30
Client ID: MW4-2
Matrix: Water
Workgroup #: WG445239
Collect Date: 09/10/2013 10:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 09/18/2013 08:56
Cal Date: 09/19/2013 09:59
Run Date: 09/19/2013 13:51
File ID: NI.091913.135149

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0511		0.00300	0.00150

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0	0.00207	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00139		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-30 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW4-2 **Prep Method:** 3015 **Prep Date:** 09/18/2013 08:56
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 09/19/2013 09:59
Workgroup #: WG445239 **Analyst:** JYH **Run Date:** 09/19/2013 14:30
Collect Date: 09/10/2013 10:15 **Dilution:** 25 **File ID:** NI.091913.143011
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.276		0.0500	0.0250

Sample #: L13090607-31 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: MW4-3 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 09/11/2013 14:13
Workgroup #: WG444637 **Analyst:** TMB **Run Date:** 09/14/2013 01:38
Collect Date: 09/10/2013 11:30 **Dilution:** 1 **File ID:** 8M390594
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0	2.98		1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.463	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.64		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.425	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	6.18		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.53		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	109	86	118	
1,2-Dichloroethane-d4	111	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	98.0	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13090607-31
Client ID: MW4-3
Matrix: Water
Workgroup #: WG446021
Collect Date: 09/10/2013 11:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 09/24/2013 07:41
Cal Date: 09/26/2013 08:44
Run Date: 09/26/2013 16:28
File ID: P2.092613.162815

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.05		0.200	0.100
Calcium, Total	7440-70-2	3.28		0.500	0.250
Iron, Total	7439-89-6	2.03		0.100	0.0500
Magnesium, Total	7439-95-4	1.54		0.500	0.250
Potassium, Total	7440-09-7	0.828	J	1.00	0.500
Sodium, Total	7440-23-5	71.5		0.500	0.250
Strontium, Total	7440-24-6	0.0830		0.0500	0.0250

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Lab Report #: L13090607
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13090607-31
Client ID: MW4-3
Matrix: Water
Workgroup #: WG445239
Collect Date: 09/10/2013 11:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 09/18/2013 08:56
Cal Date: 09/19/2013 09:59
Run Date: 09/19/2013 13:54
File ID: NI.091913.135453

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0780		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000836		0.000600	0.000300
Chromium, Total	7440-47-3	0.00204		0.00200	0.00100
Copper, Total	7440-50-8	0.00127	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000556	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0169		0.00200	0.00100
Nickel, Total	7440-02-0	0.00408		0.00400	0.00200
Selenium, Total	7782-49-2	0.00369		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00408		0.00100	0.000500
Zinc, Total	7440-66-6	0.0183	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

METHOD BLANK SUMMARY

Login Number: L13090607
Blank File ID: 8M390576
Prep Date: 09/13/13 16:19
Analyzed Date: 09/13/13 16:19
Analyst: TMB

Work Group: WG444637
Blank Sample ID: WG444637-01
Instrument ID: HPMS8
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG444637-02	8M390577	09/13/13 16:51	01
MW2-1 MS	L13090607-08	8M390578	09/13/13 17:22	01
MW2-1 MSD	L13090607-09	8M390579	09/13/13 17:53	01
TRIP BLANK 9 SEPT 2013	L13090607-26	8M390580	09/13/13 18:24	01
MW2-1	L13090607-07	8M390584	09/13/13 20:28	01
FIELD BLANK 9 SEPT 2013	L13090607-27	8M390586	09/13/13 21:30	01
MW3-1D	L13090607-17	8M390587	09/13/13 22:01	01
MW3-2	L13090607-18	8M390588	09/13/13 22:32	01
MW3-3	L13090607-19	8M390589	09/13/13 23:03	01
35BWW04	L13090607-20	8M390590	09/13/13 23:34	01
MW4-1	L13090607-28	8M390591	09/14/13 00:05	01
MW4-1D	L13090607-29	8M390592	09/14/13 00:36	01
MW4-2	L13090607-30	8M390593	09/14/13 01:07	01
MW4-3	L13090607-31	8M390594	09/14/13 01:38	01
35BWW07	L13090607-22	8M390595	09/14/13 02:09	01
35BWW11	L13090607-21	8M390596	09/14/13 02:39	01

Report Name: BLANK_SUMMARY
PDF File ID: 3097255
Report generated 09/23/2013 14:39

METHOD BLANK SUMMARY

Login Number:	L13090607	**Work Group:**	WG444664
Blank File ID:	8M390605	**Blank Sample ID:**	WG444664-01
Prep Date:	09/14/13 11:31	**Instrument ID:**	HPMS8
Analyzed Date:	09/14/13 11:31	**Method:**	8260B
Analyst:	MES		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG444664-02	8M390606	09/14/13 12:02	01
35BWW09	L13090607-01	8M390612	09/14/13 15:08	01

Report Name: BLANK_SUMMARY
PDF File ID: 3097255
Report generated 09/23/2013 14:39

METHOD BLANK SUMMARY

Login Number:	L13090607	**Work Group:**	WG444664
Blank File ID:	8M390626	**Blank Sample ID:**	WG444664-06
Prep Date:	09/14/13 22:22	**Instrument ID:**	HPMS8
Analyzed Date:	09/14/13 22:22	**Method:**	8260B
Analyst:	MES		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG444664-02	8M390606	09/14/13 12:02	01
35BWW09	L13090607-01	8M390612	09/14/13 15:08	01

Report Name: BLANK_SUMMARY
PDF File ID: 3097255
Report generated 09/23/2013 14:39

METHOD BLANK SUMMARY

Login Number: L13090607
Blank File ID: 9M958131
Prep Date: 09/13/13 13:17
Analyzed Date: 09/13/13 13:17
Analyst: ADC

Work Group: WG444595
Blank Sample ID: WG444595-01
Instrument ID: HPMS9
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG444595-02	9M958132	09/13/13 13:47	01
LCS2	WG444595-03	9M958133	09/13/13 14:35	01
TRIP BLANK4 SEPT 2013	L13090607-04	9M958136	09/13/13 16:40	01
FIELD BLANK 4 SEPT 2013	L13090607-05	9M958137	09/13/13 17:10	01
TRIP BLANK 5 SEPT 2013	L13090607-12	9M958138	09/13/13 17:39	01
TRIP BLANK 6 SEPT 2013	L13090607-13	9M958139	09/13/13 18:09	01
35BWW08	L13090607-02	9M958140	09/13/13 18:38	01
MW1-1	L13090607-03	9M958141	09/13/13 19:08	01
MW1-2	L13090607-06	9M958142	09/13/13 19:37	01
MW2-2	L13090607-10	9M958143	09/13/13 20:07	01
MW2-3	L13090607-11	9M958144	09/13/13 20:37	01
35B WW05	L13090607-14	9M958145	09/13/13 21:07	01
MW-58	L13090607-15	9M958146	09/13/13 21:37	01
MW3-1	L13090607-16	9M958147	09/13/13 22:07	01

Report Name: BLANK_SUMMARY
PDF File ID: 3097255
Report generated 09/23/2013 14:39

METHOD BLANK SUMMARY

Login Number: L13090607
Blank File ID: 9M958149
Prep Date: 09/13/13 23:06
Analyzed Date: 09/13/13 23:06
Analyst: ADC

Work Group: WG444595
Blank Sample ID: WG444595-04
Instrument ID: HPMS9
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG444595-02	9M958132	09/13/13 13:47	01
LCS2	WG444595-03	9M958133	09/13/13 14:35	01
TRIP BLANK4 SEPT 2013	L13090607-04	9M958136	09/13/13 16:40	01
FIELD BLANK 4 SEPT 2013	L13090607-05	9M958137	09/13/13 17:10	01
TRIP BLANK 5 SEPT 2013	L13090607-12	9M958138	09/13/13 17:39	01
TRIP BLANK 6 SEPT 2013	L13090607-13	9M958139	09/13/13 18:09	01
35BWW08	L13090607-02	9M958140	09/13/13 18:38	01
MW1-1	L13090607-03	9M958141	09/13/13 19:08	01
MW1-2	L13090607-06	9M958142	09/13/13 19:37	01
MW2-2	L13090607-10	9M958143	09/13/13 20:07	01
MW2-3	L13090607-11	9M958144	09/13/13 20:37	01
35B WW05	L13090607-14	9M958145	09/13/13 21:07	01
MW-58	L13090607-15	9M958146	09/13/13 21:37	01
MW3-1	L13090607-16	9M958147	09/13/13 22:07	01

Report Name: BLANK_SUMMARY
PDF File ID: 3097255
Report generated 09/23/2013 14:39

METHOD BLANK SUMMARY

Login Number: L13090607
Work Group: WG444805
Blank File ID: 9M958164
Blank Sample ID: WG444805-01
Prep Date: 09/16/13 14:22
Instrument ID: HPMS9
Analyzed Date: 09/16/13 14:22
Method: 8260B
Analyst: ADC

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG444805-02	9M958165	09/16/13 14:51	01
35BWW14MS	L13090607-24	9M958166	09/16/13 15:39	01
35BWW14MSD	L13090607-25	9M958167	09/16/13 16:08	01
35BWW14	L13090607-23	9M958169	09/16/13 17:07	01

Report Name: BLANK_SUMMARY
PDF File ID: 3097255
Report generated 09/23/2013 14:39

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/13/13 16:19 Sample ID: WG444637-01
Instrument ID: HPMS8 Run Date: 09/13/13 16:19 Prep Method: 5030B/5030C/503
File ID: 8M390576 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG444637 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-11-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3097256
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Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/13/13 16:19 Sample ID: WG444637-01
Instrument ID: HPMS8 Run Date: 09/13/13 16:19 Prep Method: 5030B/5030C/503
File ID: 8M390576 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG444637 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-11-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	104	86 - 118	PASS
1,2-Dichloroethane-d4	108	80 - 120	PASS
Toluene-d8	105	88 - 110	PASS
4-Bromofluorobenzene	100	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3097256
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/14/13 11:31 Sample ID: WG444664-01
Instrument ID: HPMS8 Run Date: 09/14/13 11:31 Prep Method: 5030B/5030C/503
File ID: 8M390605 Analyst: MES Method: 8260B
Workgroup (AAB#): WG444664 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-11-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/14/13 11:31 Sample ID: WG444664-01
Instrument ID: HPMS8 Run Date: 09/14/13 11:31 Prep Method: 5030B/5030C/503
File ID: 8M390605 Analyst: MES Method: 8260B
Workgroup (AAB#): WG444664 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-11-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	104	86 - 118	PASS
1,2-Dichloroethane-d4	109	80 - 120	PASS
Toluene-d8	104	88 - 110	PASS
4-Bromofluorobenzene	98.4	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3097256
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13090607 Prep Date:09/14/13 22:22 Sample ID:WG444664-06
Instrument ID:HPMS8 Run Date:09/14/13 22:22 Prep Method:5030B/5030C/503
File ID:8M390626 Analyst:MES Method:8260B
Workgroup (AAB#):WG444664 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-11-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3097256
23-SEP-2013 14:39

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13090607 Prep Date:09/14/13 22:22 Sample ID:WG444664-06
Instrument ID:HPMS8 Run Date:09/14/13 22:22 Prep Method:5030B/5030C/503
File ID:8M390626 Analyst:MES Method:8260B
Workgroup (AAB#):WG444664 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-11-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	111	86 - 118	PASS
1,2-Dichloroethane-d4	116	80 - 120	PASS
Toluene-d8	106	88 - 110	PASS
4-Bromofluorobenzene	96.0	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3097256
23-SEP-2013 14:39

Login Number:L13090607 Prep Date:09/13/13 13:17 Sample ID:WG444595-01
Instrument ID:HPMS9 Run Date:09/13/13 13:17 Prep Method:5030B/5030C/503
File ID:9M958131 Analyst:ADC Method:8260B
Workgroup (AAB#):WG444595 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS9-05-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3097256
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/13/13 13:17 Sample ID: WG444595-01
Instrument ID: HPMS9 Run Date: 09/13/13 13:17 Prep Method: 5030B/5030C/503
File ID: 9M958131 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG444595 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS9-05-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	104	86 - 118	PASS
1,2-Dichloroethane-d4	100	80 - 120	PASS
Toluene-d8	104	88 - 110	PASS
4-Bromofluorobenzene	104	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3097256
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13090607 Prep Date:09/13/13 23:06 Sample ID:WG444595-04
Instrument ID:HPMS9 Run Date:09/13/13 23:06 Prep Method:5030B/5030C/503
File ID:9M958149 Analyst:ADC Method:8260B
Workgroup (AAB#):WG444595 Matrix:Water 2 Units:ug/L
Contract #: Cal ID: HPMS9-05-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/13/13 23:06 Sample ID: WG444595-04
Instrument ID: HPMS9 Run Date: 09/13/13 23:06 Prep Method: 5030B/5030C/503
File ID: 9M958149 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG444595 Matrix: Water 2 Units: ug/L
Contract #: Cal ID: HPMS9-05-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	105	86 - 118	PASS
1,2-Dichloroethane-d4	99.3	80 - 120	PASS
Toluene-d8	108	88 - 110	PASS
4-Bromofluorobenzene	109	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3097256
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Login Number:L13090607 Prep Date:09/16/13 14:22 Sample ID:WG444805-01
Instrument ID:HPMS9 Run Date:09/16/13 14:22 Prep Method:5030B/5030C/503
File ID:9M958164 Analyst:ADC Method:8260B
Workgroup (AAB#):WG444805 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS9-05-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
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Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/16/13 14:22 Sample ID: WG444805-01
Instrument ID: HPMS9 Run Date: 09/16/13 14:22 Prep Method: 5030B/5030C/503
File ID: 9M958164 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG444805 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS9-05-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	105	86 - 118	PASS
1,2-Dichloroethane-d4	97.6	80 - 120	PASS
Toluene-d8	104	88 - 110	PASS
4-Bromofluorobenzene	97.2	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3097256
23-SEP-2013 14:39

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/13/2013 Sample ID: WG444637-02
Instrument ID: HPMS8 Run Time: 16:51 Prep Method: 5030B/5030C/503
File ID: 8M390577 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG444637 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD60011 Cal ID: HPMS8-11-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	21.1	105	40 - 180	
Benzene	20.0	20.9	105	80 - 121	
Bromobenzene	20.0	20.7	103	80 - 120	
Bromochloromethane	20.0	22.0	110	65 - 130	
Bromodichloromethane	20.0	21.0	105	80 - 131	
Bromoform	20.0	21.5	107	70 - 130	
Bromomethane	20.0	24.1	121	30 - 145	
2-Butanone	20.0	24.2	121	10 - 170	
n-Butylbenzene	20.0	21.6	108	80 - 131	
sec-Butylbenzene	20.0	19.8	99.1	80 - 127	
tert-Butylbenzene	20.0	19.9	99.5	80 - 126	
Carbon disulfide	20.0	20.9	105	58 - 128	
Carbon tetrachloride	20.0	21.8	109	65 - 140	
Chlorobenzene	20.0	19.2	96.1	80 - 120	
Chlorodibromomethane	20.0	21.4	107	60 - 135	
Chloroethane	20.0	21.2	106	60 - 135	
2-Chloroethyl vinyl ether	20.0	22.2	111	45 - 160	
Chloroform	20.0	21.0	105	80 - 125	
Chloromethane	20.0	19.9	99.3	40 - 125	
2-Chlorotoluene	20.0	19.0	95.0	80 - 127	
4-Chlorotoluene	20.0	20.2	101	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	22.2	111	50 - 130	
1,2-Dibromoethane	20.0	21.4	107	80 - 129	
Dibromomethane	20.0	22.3	112	75 - 125	
1,2-Dichlorobenzene	20.0	19.2	95.9	80 - 125	
1,3-Dichlorobenzene	20.0	19.4	97.2	80 - 120	
1,4-Dichlorobenzene	20.0	20.0	100	80 - 120	
Dichlorodifluoromethane	20.0	28.7	143	40 - 160	
1,1-Dichloroethane	20.0	20.7	104	80 - 125	
1,2-Dichloroethane	20.0	22.4	112	80 - 129	
1,1-Dichloroethene	20.0	21.1	105	80 - 132	
cis-1,2-Dichloroethene	20.0	22.0	110	70 - 125	
trans-1,2-Dichloroethene	20.0	21.6	108	80 - 127	
1,2-Dichloropropane	20.0	21.1	105	80 - 120	
1,3-Dichloropropane	20.0	21.5	108	80 - 120	
2,2-Dichloropropane	20.0	20.8	104	80 - 133	
cis-1,3-Dichloropropene	20.0	23.6	118	70 - 130	
trans-1,3-Dichloropropene	20.0	21.0	105	80 - 130	
1,1-Dichloropropene	20.0	21.0	105	75 - 130	
Ethylbenzene	20.0	20.1	100	80 - 122	
2-Hexanone	20.0	21.4	107	55 - 130	

LCS - Modified 03/06/2008
PDF File ID: 3083346
Report generated: 09/23/2013 14:39

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/13/2013 Sample ID: WG444637-02
Instrument ID: HPMS8 Run Time: 16:51 Prep Method: 5030B/5030C/503
File ID: 8M390577 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG444637 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD60011 Cal ID: HPMS8-11-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	18.9	94.6	72 - 132	
Isopropylbenzene	20.0	21.2	106	80 - 122	
p-Isopropyltoluene	20.0	20.5	103	80 - 122	
4-Methyl-2-pentanone	20.0	23.1	116	64 - 140	
Methylene chloride	20.0	20.8	104	80 - 123	
Naphthalene	20.0	22.8	114	59 - 149	
n-Propylbenzene	20.0	20.3	102	80 - 129	
Styrene	20.0	22.7	114	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	21.9	109	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	21.2	106	79 - 125	
Tetrachloroethene	20.0	20.9	104	80 - 124	
Toluene	20.0	21.4	107	80 - 124	
1,2,3-Trichlorobenzene	20.0	21.2	106	55 - 140	
1,2,4-Trichlorobenzene	20.0	21.1	106	65 - 135	
1,1,1-Trichloroethane	20.0	22.0	110	80 - 134	
1,1,2-Trichloroethane	20.0	21.5	108	80 - 125	
Trichloroethene	20.0	23.0	115	80 - 122	
Trichlorofluoromethane	20.0	23.6	118	62 - 151	
1,2,3-Trichloropropane	20.0	21.1	106	75 - 125	
1,2,4-Trimethylbenzene	20.0	21.8	109	80 - 125	
1,3,5-Trimethylbenzene	20.0	23.3	116	80 - 127	
Vinyl acetate	20.0	27.8	139	10 - 190	
Vinyl chloride	20.0	22.1	110	50 - 170	
o-Xylene	20.0	20.2	101	80 - 122	
m-,p-Xylene	40.0	41.6	104	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	105	86 - 118	PASS
1,2-Dichloroethane-d4	107	80 - 120	PASS
Toluene-d8	106	88 - 110	PASS
4-Bromofluorobenzene	99.7	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/14/2013 Sample ID: WG444664-02
Instrument ID: HPMS8 Run Time: 12:02 Prep Method: 5030B/5030C/503
File ID: 8M390606 Analyst: MES Method: 8260B
Workgroup (AAB#): WG444664 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD60011 Cal ID: HPMS8-11-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	20.5	102	40 - 180	
Benzene	20.0	21.1	106	80 - 121	
Bromobenzene	20.0	21.0	105	80 - 120	
Bromochloromethane	20.0	22.3	111	65 - 130	
Bromodichloromethane	20.0	21.3	106	80 - 131	
Bromoform	20.0	21.4	107	70 - 130	
Bromomethane	20.0	19.5	97.7	30 - 145	
2-Butanone	20.0	24.6	123	10 - 170	
n-Butylbenzene	20.0	21.6	108	80 - 131	
sec-Butylbenzene	20.0	20.0	100	80 - 127	
tert-Butylbenzene	20.0	19.8	99.2	80 - 126	
Carbon disulfide	20.0	21.3	106	58 - 128	
Carbon tetrachloride	20.0	23.1	115	65 - 140	
Chlorobenzene	20.0	19.1	95.7	80 - 120	
Chlorodibromomethane	20.0	21.3	106	60 - 135	
Chloroethane	20.0	21.6	108	60 - 135	
2-Chloroethyl vinyl ether	20.0	22.2	111	45 - 160	
Chloroform	20.0	21.4	107	80 - 125	
Chloromethane	20.0	17.7	88.3	40 - 125	
2-Chlorotoluene	20.0	19.0	94.9	80 - 127	
4-Chlorotoluene	20.0	19.7	98.5	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	20.8	104	50 - 130	
1,2-Dibromoethane	20.0	21.7	109	80 - 129	
Dibromomethane	20.0	22.9	114	75 - 125	
1,2-Dichlorobenzene	20.0	19.0	95.1	80 - 125	
1,3-Dichlorobenzene	20.0	19.1	95.5	80 - 120	
1,4-Dichlorobenzene	20.0	19.8	99.1	80 - 120	
Dichlorodifluoromethane	20.0	29.9	150	40 - 160	
1,1-Dichloroethane	20.0	20.9	104	80 - 125	
1,2-Dichloroethane	20.0	22.9	115	80 - 129	
1,1-Dichloroethene	20.0	21.7	108	80 - 132	
cis-1,2-Dichloroethene	20.0	22.1	111	70 - 125	
trans-1,2-Dichloroethene	20.0	22.0	110	80 - 127	
1,2-Dichloropropane	20.0	21.4	107	80 - 120	
1,3-Dichloropropane	20.0	20.9	105	80 - 120	
2,2-Dichloropropane	20.0	22.7	113	80 - 133	
cis-1,3-Dichloropropene	20.0	23.9	120	70 - 130	
trans-1,3-Dichloropropene	20.0	21.1	106	80 - 130	
1,1-Dichloropropene	20.0	21.8	109	75 - 130	
Ethylbenzene	20.0	20.4	102	80 - 122	
2-Hexanone	20.0	21.0	105	55 - 130	

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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/14/2013 Sample ID: WG444664-02
Instrument ID: HPMS8 Run Time: 12:02 Prep Method: 5030B/5030C/503
File ID: 8M390606 Analyst: MES Method: 8260B
Workgroup (AAB#): WG444664 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD60011 Cal ID: HPMS8-11-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	19.5	97.3	72 - 132	
Isopropylbenzene	20.0	21.5	107	80 - 122	
p-Isopropyltoluene	20.0	20.5	103	80 - 122	
4-Methyl-2-pentanone	20.0	23.7	119	64 - 140	
Methylene chloride	20.0	20.7	103	80 - 123	
Naphthalene	20.0	21.5	107	59 - 149	
n-Propylbenzene	20.0	20.2	101	80 - 129	
Styrene	20.0	22.8	114	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	21.6	108	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	21.1	105	79 - 125	
Tetrachloroethene	20.0	21.4	107	80 - 124	
Toluene	20.0	21.3	107	80 - 124	
1,2,3-Trichlorobenzene	20.0	20.2	101	55 - 140	
1,2,4-Trichlorobenzene	20.0	20.5	103	65 - 135	
1,1,1-Trichloroethane	20.0	23.0	115	80 - 134	
1,1,2-Trichloroethane	20.0	21.6	108	80 - 125	
Trichloroethene	20.0	23.5	118	80 - 122	
Trichlorofluoromethane	20.0	24.6	123	62 - 151	
1,2,3-Trichloropropane	20.0	20.7	103	75 - 125	
1,2,4-Trimethylbenzene	20.0	21.8	109	80 - 125	
1,3,5-Trimethylbenzene	20.0	22.9	115	80 - 127	
Vinyl acetate	20.0	30.4	152	10 - 190	
Vinyl chloride	20.0	23.0	115	50 - 170	
o-Xylene	20.0	19.8	99.2	80 - 122	
m-,p-Xylene	40.0	41.9	105	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	108	86 - 118	PASS
1,2-Dichloroethane-d4	110	80 - 120	PASS
Toluene-d8	105	88 - 110	PASS
4-Bromofluorobenzene	98.4	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/13/2013 Sample ID: WG444595-02
Instrument ID: HPMS9 Run Time: 13:47 Prep Method: 5030B/5030C/503
File ID: 9M958132 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG444595 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD60011 Cal ID: HPMS9-05-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	14.0	70.2	40 - 180	
Benzene	20.0	19.3	96.7	80 - 121	
Bromobenzene	20.0	20.1	101	80 - 120	
Bromochloromethane	20.0	20.3	102	65 - 130	
Bromodichloromethane	20.0	19.4	96.9	80 - 131	
Bromoform	20.0	20.4	102	70 - 130	
Bromomethane	20.0	16.9	84.5	30 - 145	
2-Butanone	20.0	21.3	106	10 - 170	
n-Butylbenzene	20.0	21.8	109	80 - 131	
sec-Butylbenzene	20.0	20.1	100	80 - 127	
tert-Butylbenzene	20.0	18.9	94.6	80 - 126	
Carbon disulfide	20.0	19.4	97.1	58 - 128	
Carbon tetrachloride	20.0	19.8	99.2	65 - 140	
Chlorobenzene	20.0	18.6	93.1	80 - 120	
Chlorodibromomethane	20.0	21.4	107	60 - 135	
Chloroethane	20.0	17.8	89.0	60 - 135	
2-Chloroethyl vinyl ether	20.0	22.2	111	45 - 160	
Chloroform	20.0	19.9	99.6	80 - 125	
Chloromethane	20.0	14.8	74.0	40 - 125	
2-Chlorotoluene	20.0	18.6	92.8	80 - 127	
4-Chlorotoluene	20.0	19.8	99.2	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	23.6	118	50 - 130	
1,2-Dibromoethane	20.0	20.9	105	80 - 129	
Dibromomethane	20.0	21.0	105	75 - 125	
1,2-Dichlorobenzene	20.0	19.4	97.0	80 - 125	
1,3-Dichlorobenzene	20.0	19.0	94.8	80 - 120	
1,4-Dichlorobenzene	20.0	20.4	102	80 - 120	
Dichlorodifluoromethane	20.0	13.9	69.5	40 - 160	
1,1-Dichloroethane	20.0	19.0	94.8	80 - 125	
1,2-Dichloroethane	20.0	20.4	102	80 - 129	
1,1-Dichloroethene	20.0	17.7	88.6	80 - 132	
cis-1,2-Dichloroethene	20.0	20.0	100	70 - 125	
trans-1,2-Dichloroethene	20.0	19.3	96.7	80 - 127	
1,2-Dichloropropane	20.0	19.5	97.7	80 - 120	
1,3-Dichloropropane	20.0	21.0	105	80 - 120	
2,2-Dichloropropane	20.0	19.1	95.6	80 - 133	
cis-1,3-Dichloropropene	20.0	21.3	106	70 - 130	
trans-1,3-Dichloropropene	20.0	20.4	102	80 - 130	
1,1-Dichloropropene	20.0	18.8	94.1	75 - 130	
Ethylbenzene	20.0	19.3	96.3	80 - 122	
2-Hexanone	20.0	20.7	103	55 - 130	

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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/13/2013 Sample ID: WG444595-02
Instrument ID: HPMS9 Run Time: 13:47 Prep Method: 5030B/5030C/503
File ID: 9M958132 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG444595 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD60011 Cal ID: HPMS9-05-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	22.2	111	72 - 132	
Isopropylbenzene	20.0	19.4	97.2	80 - 122	
p-Isopropyltoluene	20.0	20.4	102	80 - 122	
4-Methyl-2-pentanone	20.0	21.1	105	64 - 140	
Methylene chloride	20.0	18.9	94.4	80 - 123	
Naphthalene	20.0	25.5	128	59 - 149	
n-Propylbenzene	20.0	18.8	94.1	80 - 129	
Styrene	20.0	20.7	104	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	20.4	102	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	23.0	115	79 - 125	
Tetrachloroethene	20.0	20.3	101	80 - 124	
Toluene	20.0	20.7	103	80 - 124	
1,2,3-Trichlorobenzene	20.0	22.2	111	55 - 140	
1,2,4-Trichlorobenzene	20.0	21.6	108	65 - 135	
1,1,1-Trichloroethane	20.0	19.7	98.7	80 - 134	
1,1,2-Trichloroethane	20.0	21.4	107	80 - 125	
Trichloroethene	20.0	20.9	104	80 - 122	
Trichlorofluoromethane	20.0	19.5	97.5	62 - 151	
1,2,3-Trichloropropane	20.0	22.0	110	75 - 125	
1,2,4-Trimethylbenzene	20.0	22.1	110	80 - 125	
1,3,5-Trimethylbenzene	20.0	22.2	111	80 - 127	
Vinyl acetate	20.0	27.5	138	10 - 190	
Vinyl chloride	20.0	16.3	81.7	50 - 170	
o-Xylene	20.0	18.0	90.2	80 - 122	
m-,p-Xylene	40.0	39.5	98.8	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	111	86 - 118	PASS
1,2-Dichloroethane-d4	103	80 - 120	PASS
Toluene-d8	108	88 - 110	PASS
4-Bromofluorobenzene	104	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3083346
Report generated: 09/23/2013 14:39

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/16/2013 Sample ID: WG444805-02
Instrument ID: HPMS9 Run Time: 14:51 Prep Method: 5030B/5030C/503
File ID: 9M958165 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG444805 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD60011 Cal ID: HPMS9-05-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	13.5	67.4	40 - 180	
Benzene	20.0	19.2	96.2	80 - 121	
Bromobenzene	20.0	18.1	90.5	80 - 120	
Bromochloromethane	20.0	19.5	97.4	65 - 130	
Bromodichloromethane	20.0	19.0	95.1	80 - 131	
Bromoform	20.0	19.3	96.7	70 - 130	
Bromomethane	20.0	19.1	95.5	30 - 145	
2-Butanone	20.0	18.8	94.1	10 - 170	
n-Butylbenzene	20.0	19.0	95.1	80 - 131	
sec-Butylbenzene	20.0	17.6	88.1	80 - 127	
tert-Butylbenzene	20.0	16.9	84.5	80 - 126	
Carbon disulfide	20.0	19.1	95.4	58 - 128	
Carbon tetrachloride	20.0	19.7	98.7	65 - 140	
Chlorobenzene	20.0	18.0	89.9	80 - 120	
Chlorodibromomethane	20.0	20.6	103	60 - 135	
Chloroethane	20.0	19.0	95.1	60 - 135	
2-Chloroethyl vinyl ether	20.0	19.4	97.1	45 - 160	
Chloroform	20.0	19.4	96.9	80 - 125	
Chloromethane	20.0	18.1	90.5	40 - 125	
2-Chlorotoluene	20.0	16.4	82.1	80 - 127	
4-Chlorotoluene	20.0	17.5	87.6	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	18.8	93.8	50 - 130	
1,2-Dibromoethane	20.0	19.6	97.9	80 - 129	
Dibromomethane	20.0	19.8	99.2	75 - 125	
1,2-Dichlorobenzene	20.0	17.0	85.0	80 - 125	
1,3-Dichlorobenzene	20.0	16.9	84.6	80 - 120	
1,4-Dichlorobenzene	20.0	18.2	91.2	80 - 120	
Dichlorodifluoromethane	20.0	24.6	123	40 - 160	
1,1-Dichloroethane	20.0	18.5	92.6	80 - 125	
1,2-Dichloroethane	20.0	19.0	95.2	80 - 129	
1,1-Dichloroethene	20.0	17.8	88.8	80 - 132	
cis-1,2-Dichloroethene	20.0	19.5	97.7	70 - 125	
trans-1,2-Dichloroethene	20.0	19.2	96.0	80 - 127	
1,2-Dichloropropane	20.0	19.5	97.4	80 - 120	
1,3-Dichloropropane	20.0	19.4	97.2	80 - 120	
2,2-Dichloropropane	20.0	19.4	96.8	80 - 133	
cis-1,3-Dichloropropene	20.0	20.7	103	70 - 130	
trans-1,3-Dichloropropene	20.0	19.3	96.5	80 - 130	
1,1-Dichloropropene	20.0	18.6	93.0	75 - 130	
Ethylbenzene	20.0	18.6	93.1	80 - 122	
2-Hexanone	20.0	18.0	90.0	55 - 130	

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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/16/2013 Sample ID: WG444805-02
Instrument ID: HPMS9 Run Time: 14:51 Prep Method: 5030B/5030C/503
File ID: 9M958165 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG444805 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD60011 Cal ID: HPMS9-05-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	19.0	95.1	72 - 132	
Isopropylbenzene	20.0	18.6	93.2	80 - 122	
p-Isopropyltoluene	20.0	18.2	91.1	80 - 122	
4-Methyl-2-pentanone	20.0	19.1	95.3	64 - 140	
Methylene chloride	20.0	18.7	93.6	80 - 123	
Naphthalene	20.0	20.0	100	59 - 149	
n-Propylbenzene	20.0	16.7	83.6	80 - 129	
Styrene	20.0	20.1	101	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	19.3	96.7	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	19.7	98.5	79 - 125	
Tetrachloroethene	20.0	19.5	97.7	80 - 124	
Toluene	20.0	19.8	98.9	80 - 124	
1,2,3-Trichlorobenzene	20.0	18.7	93.6	55 - 140	
1,2,4-Trichlorobenzene	20.0	18.7	93.4	65 - 135	
1,1,1-Trichloroethane	20.0	19.9	99.4	80 - 134	
1,1,2-Trichloroethane	20.0	20.1	101	80 - 125	
Trichloroethene	20.0	20.6	103	80 - 122	
Trichlorofluoromethane	20.0	20.7	104	62 - 151	
1,2,3-Trichloropropane	20.0	19.1	95.4	75 - 125	
1,2,4-Trimethylbenzene	20.0	19.5	97.7	80 - 125	
1,3,5-Trimethylbenzene	20.0	19.6	98.0	80 - 127	
Vinyl acetate	20.0	25.3	126	10 - 190	
Vinyl chloride	20.0	19.0	95.2	50 - 170	
o-Xylene	20.0	17.2	86.2	80 - 122	
m-,p-Xylene	40.0	37.7	94.4	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	104	86 - 118	PASS
1,2-Dichloroethane-d4	97.3	80 - 120	PASS
Toluene-d8	103	88 - 110	PASS
4-Bromofluorobenzene	92.7	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3083346
Report generated: 09/23/2013 14:39

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Analyst: ADC Prep Method: 5030B/5030C/503
Instrument ID: HPMS9 Matrix: Water Method: 8260B
Workgroup (AAB#): WG444595 Units: ug/L
QC Key: STD Lot #: STD60011

Sample ID: WG444595-02 LCS File ID: 9M958132 Run Date: 09/13/2013 13:47
Sample ID: WG444595-03 LCS2 File ID: 9M958133 Run Date: 09/13/2013 14:35

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	20.4	102	20.0	21.0	105	2.83	80 - 130	20	
1,1,1-Trichloroethane	20.0	19.7	98.7	20.0	20.1	100	1.66	80 - 134	20	
1,1,2,2-Tetrachloroethane	20.0	23.0	115	20.0	22.7	114	1.08	79 - 125	20	
1,1,2-Trichloroethane	20.0	21.4	107	20.0	20.9	105	2.14	80 - 125	20	
1,1-Dichloroethane	20.0	19.0	94.8	20.0	19.4	96.8	2.16	80 - 125	20	
1,1-Dichloroethene	20.0	17.7	88.6	20.0	18.5	92.4	4.17	80 - 132	20	
1,1-Dichloropropene	20.0	18.8	94.1	20.0	19.6	98.0	4.13	75 - 130	20	
1,2,3-Trichlorobenzene	20.0	22.2	111	20.0	23.8	119	6.92	55 - 140	20	
1,2,3-Trichloropropane	20.0	22.0	110	20.0	23.4	117	6.17	75 - 125	20	
1,2,4-Trichlorobenzene	20.0	21.6	108	20.0	23.1	115	6.58	65 - 135	20	
1,2,4-Trimethylbenzene	20.0	22.1	110	20.0	23.7	118	7.09	80 - 125	20	
1,2-Dibromo-3-chloropropane	20.0	23.6	118	20.0	23.6	118	0.207	50 - 130	20	
1,2-Dibromoethane	20.0	20.9	105	20.0	20.5	102	2.20	80 - 129	20	
1,2-Dichlorobenzene	20.0	19.4	97.0	20.0	20.4	102	5.05	80 - 125	20	
1,2-Dichloroethane	20.0	20.4	102	20.0	20.7	103	1.17	80 - 129	20	
1,2-Dichloropropane	20.0	19.5	97.7	20.0	20.1	101	2.88	80 - 120	20	
1,3,5-Trimethylbenzene	20.0	22.2	111	20.0	23.9	119	7.07	80 - 127	20	
1,3-Dichlorobenzene	20.0	19.0	94.8	20.0	20.1	101	5.90	80 - 120	20	
1,3-Dichloropropane	20.0	21.0	105	20.0	20.5	103	2.29	80 - 120	20	
1,4-Dichlorobenzene	20.0	20.4	102	20.0	21.9	109	6.94	80 - 120	20	
2,2-Dichloropropane	20.0	19.1	95.6	20.0	19.4	97.2	1.71	80 - 133	20	
2-Butanone	20.0	21.3	106	20.0	20.9	105	1.62	10 - 170	20	
2-Chloroethyl vinyl ether	20.0	22.2	111	20.0	22.0	110	0.935	45 - 160	20	
2-Chlorotoluene	20.0	18.6	92.8	20.0	19.5	97.6	5.04	80 - 127	20	
2-Hexanone	20.0	20.7	103	20.0	20.6	103	0.109	55 - 130	20	
4-Chlorotoluene	20.0	19.8	99.2	20.0	21.5	107	7.95	80 - 126	20	
4-Methyl-2-pentanone	20.0	21.1	105	20.0	20.4	102	3.14	64 - 140	20	
Acetone	20.0	14.0	70.2	20.0	14.8	74.1	5.31	40 - 180	20	
Benzene	20.0	19.3	96.7	20.0	19.6	98.0	1.27	80 - 121	20	
Bromobenzene	20.0	20.1	101	20.0	21.4	107	6.27	80 - 120	20	
Bromochloromethane	20.0	20.3	102	20.0	19.9	99.5	1.97	65 - 130	20	
Bromodichloromethane	20.0	19.4	96.9	20.0	19.3	96.3	0.644	80 - 131	20	
Bromoform	20.0	20.4	102	20.0	20.1	101	1.51	70 - 130	20	
Bromomethane	20.0	16.9	84.5	20.0	18.0	89.8	6.05	30 - 145	20	
Carbon disulfide	20.0	19.4	97.1	20.0	20.0	100	3.23	58 - 128	20	
Carbon tetrachloride	20.0	19.8	99.2	20.0	20.2	101	1.81	65 - 140	20	
Chlorobenzene	20.0	18.6	93.1	20.0	18.8	94.2	1.17	80 - 120	20	
Chloroethane	20.0	17.8	89.0	20.0	18.6	92.9	4.24	60 - 135	20	
Chloroform	20.0	19.9	99.6	20.0	20.1	100	0.801	80 - 125	20	
Chloromethane	20.0	14.8	74.0	20.0	15.6	78.1	5.35	40 - 125	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3086095
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Analyst: ADC Prep Method: 5030B/5030C/503
Instrument ID: HPMS9 Matrix: Water Method: 8260B
Workgroup (AAB#): WG444595 Units: ug/L
QC Key: STD Lot #: STD60011

Sample ID: WG444595-02 LCS File ID: 9M958132 Run Date: 09/13/2013 13:47
Sample ID: WG444595-03 LCS2 File ID: 9M958133 Run Date: 09/13/2013 14:35

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,2-Dichloroethene	20.0	20.0	100	20.0	19.9	99.6	0.484	70 - 125	20	
cis-1,3-Dichloropropene	20.0	21.3	106	20.0	21.0	105	1.64	70 - 130	20	
Chlorodibromomethane	20.0	21.4	107	20.0	21.5	108	0.332	60 - 135	20	
Dibromomethane	20.0	21.0	105	20.0	20.4	102	3.03	75 - 125	20	
Dichlorodifluoromethane	20.0	13.9	69.5	20.0	15.5	77.7	11.2	40 - 160	20	
Ethylbenzene	20.0	19.3	96.3	20.0	20.0	100	3.96	80 - 122	20	
Hexachlorobutadiene	20.0	22.2	111	20.0	24.3	121	9.09	72 - 132	20	
Isopropylbenzene	20.0	19.4	97.2	20.0	20.0	99.8	2.66	80 - 122	20	
m-,p-Xylene	40.0	39.5	98.8	40.0	40.2	101	1.72	80 - 122	20	
Methylene chloride	20.0	18.9	94.4	20.0	19.5	97.7	3.44	80 - 123	20	
n-Butylbenzene	20.0	21.8	109	20.0	23.8	119	8.61	80 - 131	20	
n-Propylbenzene	20.0	18.8	94.1	20.0	20.2	101	7.15	80 - 129	20	
Naphthalene	20.0	25.5	128	20.0	25.8	129	0.975	59 - 149	20	
o-Xylene	20.0	18.0	90.2	20.0	18.7	93.3	3.33	80 - 122	20	
p-Isopropyltoluene	20.0	20.4	102	20.0	22.2	111	8.34	80 - 122	20	
sec-Butylbenzene	20.0	20.1	100	20.0	21.7	108	7.77	80 - 127	20	
Styrene	20.0	20.7	104	20.0	21.2	106	2.47	80 - 123	20	
tert-Butylbenzene	20.0	18.9	94.6	20.0	20.3	102	7.15	80 - 126	20	
Tetrachloroethene	20.0	20.3	101	20.0	21.4	107	5.25	80 - 124	20	
Toluene	20.0	20.7	103	20.0	21.1	106	2.24	80 - 124	20	
trans-1,2-Dichloroethene	20.0	19.3	96.7	20.0	20.1	101	4.02	80 - 127	20	
trans-1,3-Dichloropropene	20.0	20.4	102	20.0	20.5	103	0.512	80 - 130	20	
Trichloroethene	20.0	20.9	104	20.0	21.6	108	3.54	80 - 122	20	
Trichlorofluoromethane	20.0	19.5	97.5	20.0	20.6	103	5.73	62 - 151	20	
Vinyl acetate	20.0	27.5	138	20.0	22.4	112	20.7	10 - 190	20	#
Vinyl chloride	20.0	16.3	81.7	20.0	17.7	88.4	7.89	50 - 170	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	103	103	80 - 120	PASS
Dibromofluoromethane	111	109	86 - 118	PASS
4-Bromofluorobenzene	104	110	86 - 115	PASS
Toluene-d8	108	108	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
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Report generated: 09/23/2013 14:39

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13090607 Cal ID: HPMS8- 11-SEP-13 Worknum: WG444637

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13090607-07 File ID: 8M390584 Dil: 1 Method: 5035A

Sample ID: L13090607-08 MS File ID: 8M390578 Dil: 1 Matrix: 8260B

Sample ID: L13090607-09 MSD File ID: 8M390579 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	21.3	107	20.0	21.0	105	1.23	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	21.4	107	20.0	21.3	106	0.506	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	20.5	102	20.0	20.7	103	1.04	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	21.5	107	20.0	20.9	105	2.58	80 - 125	20	
1,1-Dichloroethane	ND	20.0	20.0	99.9	20.0	19.8	99.2	0.658	80 - 125	20	
1,1-Dichloroethene	ND	20.0	20.3	102	20.0	20.1	100	1.34	80 - 132	20	
1,1-Dichloropropene	ND	20.0	20.7	103	20.0	20.3	102	1.83	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	21.0	105	20.0	21.0	105	0.0040	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	21.3	106	20.0	20.6	103	3.22	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	21.0	105	20.0	21.0	105	0.220	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	21.5	108	20.0	21.4	107	0.499	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	20.9	104	20.0	20.7	103	0.937	50 - 130	20	
1,2-Dibromoethane	ND	20.0	21.2	106	20.0	20.7	103	2.31	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	19.0	94.8	20.0	18.9	94.7	0.167	80 - 125	20	
1,2-Dichloroethane	ND	20.0	21.8	109	20.0	21.7	108	0.648	80 - 129	20	
1,2-Dichloropropane	ND	20.0	20.6	103	20.0	21.0	105	2.31	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	22.8	114	20.0	22.7	114	0.332	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	19.0	95	20.0	18.8	93.8	1.28	80 - 120	20	
1,3-Dichloropropane	ND	20.0	21.4	107	20.0	20.9	104	2.45	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	19.7	98.6	20.0	19.7	98.5	0.0237	80 - 120	20	
2,2-Dichloropropane	ND	20.0	21.6	108	20.0	20.8	104	3.73	80 - 133	20	
2-Butanone	ND	20.0	22.3	111	20.0	21.2	106	4.98	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	2.62	13.1	20.0	0	0	200	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	19.2	96.2	20.0	19.7	98.6	2.52	80 - 127	20	
2-Hexanone	ND	20.0	21.6	108	20.0	20.8	104	4.05	55 - 130	20	
4-Chlorotoluene	ND	20.0	18.6	92.8	20.0	18.8	93.9	1.17	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	21.4	107	20.0	20.7	104	3.31	64 - 140	20	
Acetone	ND	20.0	20.1	100	20.0	18.9	94.7	5.85	40 - 180	20	
Benzene	ND	20.0	20.4	102	20.0	20.1	100	1.49	80 - 121	20	
Bromobenzene	ND	20.0	20.3	101	20.0	20.7	104	2.35	80 - 120	20	
Bromochloromethane	ND	20.0	21.5	108	20.0	21.5	107	0.252	65 - 130	20	
Bromodichloromethane	ND	20.0	20.7	104	20.0	20.3	102	2.09	80 - 131	20	
Bromoform	ND	20.0	21.1	106	20.0	20.9	105	0.958	70 - 130	20	
Bromomethane	ND	20.0	22.0	110	20.0	21.5	107	2.35	30 - 145	20	
Carbon disulfide	ND	20.0	20.5	103	20.0	20.4	102	0.816	58 - 128	20	
Carbon tetrachloride	ND	20.0	21.4	107	20.0	21.0	105	1.89	65 - 140	20	
Chlorobenzene	ND	20.0	18.5	92.6	20.0	18.6	92.8	0.149	80 - 120	20	
Chloroethane	ND	20.0	20.4	102	20.0	19.9	99.7	2.35	60 - 135	20	
Chloroform	ND	20.0	20.7	104	20.0	20.4	102	1.72	80 - 125	20	
Chloromethane	ND	20.0	18.7	93.6	20.0	18.9	94.4	0.785	40 - 125	20	
cis-1,2-Dichloroethene	ND	20.0	21.7	108	20.0	21.5	107	1.06	70 - 125	20	

MS_MSD - Modified 03/06/2008

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13090607 Cal ID: HPMS8 11-SEP-13 Worknum: WG444637

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13090607-07 File ID: 8M390584 Dil: 1 Method: 5035A

Sample ID: L13090607-08 MS File ID: 8M390578 Dil: 1 Matrix: 8260B

Sample ID: L13090607-09 MSD File ID: 8M390579 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	23.3	117	20.0	23.0	115	1.45	70 - 130	20	
Chlorodibromomethane	ND	20.0	20.9	104	20.0	20.9	105	0.319	60 - 135	20	
Dibromomethane	ND	20.0	21.7	109	20.0	21.5	107	1.15	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	27.4	137	20.0	27.6	138	0.516	50 - 160	20	
Ethylbenzene	ND	20.0	19.7	98.6	20.0	19.4	96.9	1.74	80 - 122	20	
Hexachlorobutadiene	ND	20.0	19.4	97.1	20.0	19.4	96.9	0.222	72 - 132	20	
Isopropylbenzene	ND	20.0	20.8	104	20.0	20.7	103	0.651	80 - 122	20	
m-,p-Xylene	ND	40.0	40.7	102	40.0	40.8	102	0.261	80 - 122	20	
Methylene chloride	ND	20.0	20.4	102	20.0	19.9	99.7	2.21	80 - 123	20	
n-Butylbenzene	ND	20.0	21.5	107	20.0	21.4	107	0.192	80 - 131	20	
n-Propylbenzene	ND	20.0	19.8	99	20.0	20.0	100	1.14	80 - 129	20	
Naphthalene	ND	20.0	22.5	112	20.0	22.5	113	0.302	59 - 149	20	
o-Xylene	ND	20.0	19.8	98.8	20.0	19.7	98.5	0.289	80 - 122	20	
p-Isopropyltoluene	ND	20.0	20.2	101	20.0	20.1	101	0.481	80 - 122	20	
sec-Butylbenzene	ND	20.0	19.5	97.3	20.0	19.7	98.3	1.02	80 - 127	20	
Styrene	ND	20.0	22.0	110	20.0	22.1	110	0.263	80 - 123	20	
tert-Butylbenzene	ND	20.0	19.5	97.4	20.0	19.4	97	0.378	80 - 126	20	
Tetrachloroethene	1.67	20.0	22.0	101	20.0	21.5	99.3	2.02	80 - 124	20	
Toluene	ND	20.0	21.0	105	20.0	20.9	105	0.342	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	21.2	106	20.0	21.0	105	0.821	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	20.7	104	20.0	20.5	102	1.11	80 - 130	20	
Trichloroethene	2.15	20.0	23.9	109	20.0	24.1	110	0.872	80 - 122	20	
Trichlorofluoromethane	ND	20.0	22.4	112	20.0	22.0	110	1.79	62 - 151	20	
Vinyl acetate	ND	20.0	27.1	136	20.0	26.8	134	1.44	10 - 190	20	
Vinyl chloride	ND	20.0	21.0	105	20.0	20.8	104	0.955	50 - 170	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13090607 Cal ID: HPMS9- 05-SEP-13 Worknum: WG444805

Instrument ID: HPMS9 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13090607-23 File ID: 9M958169 Dil: 1 Method: 5035A

Sample ID: L13090607-24 MS File ID: 9M958166 Dil: 1 Matrix: 8260B

Sample ID: L13090607-25 MSD File ID: 9M958167 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	20.4	102	20.0	22.2	111	8.50	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	19.4	97.2	20.0	21.4	107	9.43	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	21.5	108	20.0	24.6	123	13.2	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	20.0	99.8	20.0	22.2	111	10.8	80 - 125	20	
1,1-Dichloroethane	4.88	20.0	22.8	89.7	20.0	24.6	98.4	7.32	80 - 125	20	
1,1-Dichloroethene	52.8	20.0	60.8	40.2	20.0	66.8	70.2	9.42	80 - 132	20	*
1,1-Dichloropropene	ND	20.0	19.0	95.2	20.0	20.6	103	7.82	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	20.7	104	20.0	23.1	115	10.8	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	20.1	101	20.0	22.8	114	12.5	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	20.6	103	20.0	22.6	113	9.31	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	22.0	110	20.0	23.8	119	7.99	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	19.7	98.7	20.0	22.7	113	13.8	50 - 130	20	
1,2-Dibromoethane	ND	20.0	19.6	98.2	20.0	21.8	109	10.3	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	18.8	94.2	20.0	21.0	105	10.6	80 - 125	20	
1,2-Dichloroethane	0.312	20.0	19.4	95.5	20.0	21.6	107	10.8	80 - 129	20	
1,2-Dichloropropane	ND	20.0	19.7	98.5	20.0	21.4	107	8.37	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	22.0	110	20.0	24.0	120	8.59	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	19.2	95.8	20.0	20.8	104	8.02	80 - 120	20	
1,3-Dichloropropane	ND	20.0	19.5	97.6	20.0	21.7	109	10.8	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	20.6	103	20.0	21.9	110	6.32	80 - 120	20	
2,2-Dichloropropane	ND	20.0	19.6	98.2	20.0	21.6	108	9.30	80 - 133	20	
2-Butanone	ND	20.0	17.3	86.7	20.0	19.8	98.9	13.2	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	5.71	28.6	20.0	0	0	200	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	20.8	104	20.0	19.7	98.7	5.38	80 - 127	20	
2-Hexanone	ND	20.0	17.2	86.2	20.0	20.5	102	17.3	55 - 130	20	
4-Chlorotoluene	ND	20.0	16.9	84.3	20.0	21.7	108	25.0	80 - 126	20	#
4-Methyl-2-pentanone	ND	20.0	17.2	85.9	20.0	20.0	100	15.2	64 - 140	20	
Acetone	ND	20.0	13.8	69.2	20.0	14.5	72.4	4.43	40 - 180	20	
Benzene	0.223	20.0	19.3	95.4	20.0	21.0	104	8.50	80 - 121	20	
Bromobenzene	ND	20.0	19.7	98.5	20.0	21.9	109	10.5	80 - 120	20	
Bromochloromethane	ND	20.0	19.4	96.9	20.0	21.8	109	11.6	65 - 130	20	
Bromodichloromethane	ND	20.0	19.1	95.7	20.0	21.2	106	10.1	80 - 131	20	
Bromoform	ND	20.0	19.3	96.4	20.0	21.6	108	11.5	70 - 130	20	
Bromomethane	ND	20.0	17.4	87	20.0	17.8	89	2.30	30 - 145	20	
Carbon disulfide	ND	20.0	19.1	95.3	20.0	20.8	104	8.65	58 - 128	20	
Carbon tetrachloride	ND	20.0	19.5	97.4	20.0	20.9	105	7.26	65 - 140	20	
Chlorobenzene	0.231	20.0	18.8	92.8	20.0	20.3	101	7.94	80 - 120	20	
Chloroethane	ND	20.0	17.3	86.5	20.0	18.7	93.7	8.03	60 - 135	20	
Chloroform	0.166	20.0	19.6	97.4	20.0	21.2	105	7.61	80 - 125	20	
Chloromethane	ND	20.0	14.1	70.7	20.0	14.8	74.2	4.76	40 - 125	20	
cis-1,2-Dichloroethene	13.7	20.0	31.7	89.9	20.0	34.5	104	8.64	70 - 125	20	

MS_MSD - Modified 03/06/2008

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13090607 Cal ID: HPMS9 05-SEP-13 Worknum: WG444805

Instrument ID: HPMS9 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13090607-23 File ID: 9M958169 Dil: 1 Method: 5035A

Sample ID: L13090607-24 MS File ID: 9M958166 Dil: 1 Matrix: 8260B

Sample ID: L13090607-25 MSD File ID: 9M958167 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	20.6	103	20.0	22.7	114	9.64	70 - 130	20	
Chlorodibromomethane	ND	20.0	21.0	105	20.0	22.9	115	8.67	60 - 135	20	
Dibromomethane	ND	20.0	20.1	100	20.0	22.5	113	11.5	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	12.2	61.2	20.0	12.9	64.4	5.05	50 - 160	20	
Ethylbenzene	ND	20.0	19.3	96.5	20.0	21.1	106	8.91	80 - 122	20	
Hexachlorobutadiene	ND	20.0	21.7	109	20.0	23.1	116	6.31	72 - 132	20	
Isopropylbenzene	ND	20.0	19.3	96.7	20.0	21.1	106	8.73	80 - 122	20	
m-,p-Xylene	ND	40.0	39.4	98.5	40.0	42.8	107	8.24	80 - 122	20	
Methylene chloride	ND	20.0	18.8	94.1	20.0	20.4	102	7.87	80 - 123	20	
n-Butylbenzene	ND	20.0	22.0	110	20.0	23.8	119	7.76	80 - 131	20	
n-Propylbenzene	ND	20.0	18.9	94.3	20.0	20.5	102	8.20	80 - 129	20	
Naphthalene	ND	20.0	21.2	106	20.0	24.1	121	12.8	59 - 149	20	
o-Xylene	ND	20.0	18.2	90.8	20.0	19.6	97.9	7.57	80 - 122	20	
p-Isopropyltoluene	ND	20.0	20.6	103	20.0	22.4	112	8.11	80 - 122	20	
sec-Butylbenzene	ND	20.0	20.0	99.8	20.0	21.5	107	7.42	80 - 127	20	
Styrene	ND	20.0	20.6	103	20.0	22.4	112	8.64	80 - 123	20	
tert-Butylbenzene	ND	20.0	18.9	94.3	20.0	20.4	102	7.86	80 - 126	20	
Tetrachloroethene	26.8	20.0	43.9	85.3	20.0	48.1	106	9.20	80 - 124	20	
Toluene	ND	20.0	20.5	102	20.0	22.4	112	9.10	80 - 124	20	
trans-1,2-Dichloroethene	0.514	20.0	19.3	93.9	20.0	20.7	101	6.91	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	19.5	97.5	20.0	21.6	108	9.99	80 - 130	20	
Trichloroethene	89.7	20.0	94.6	24.6	20.0	104	71.8	9.51	80 - 122	20	*
Trichlorofluoromethane	ND	20.0	19.5	97.4	20.0	20.9	105	7.15	62 - 151	20	
Vinyl acetate	ND	20.0	27.5	138	20.0	28.6	143	3.66	10 - 190	20	
Vinyl chloride	3.81	20.0	19.3	77.3	20.0	20.4	82.9	5.64	50 - 170	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3083513

Report generated 09/23/2013 14:39

METHOD BLANK SUMMARY

Login Number: L13090607
Work Group: WG445227
Blank File ID: P2.091913.111127
Blank Sample ID: WG445115-02
Prep Date: 09/18/13 13:12
Instrument ID: PE-ICP2
Analyzed Date: 09/19/13 11:11
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG445115-03	P2.091913.111429	09/19/13 11:14	01
FLT_BLK	WG445115-04	P2.091913.111634	09/19/13 11:16	01
MW2-1	L13090607-07	P2.091913.112141	09/19/13 11:21	01
MW2-1 MS	L13090607-08	P2.091913.112443	09/19/13 11:24	01
MW2-1 MSD	L13090607-09	P2.091913.112648	09/19/13 11:26	01
MW2-2	L13090607-10	P2.091913.112853	09/19/13 11:28	01
35BWW09	L13090607-01	P2.092513.130907	09/25/13 13:09	01
35BWW08	L13090607-02	P2.092513.131212	09/25/13 13:12	01
MW1-1	L13090607-03	P2.092513.132024	09/25/13 13:20	01
FIELD BLANK 4 SEPT 2013	L13090607-05	P2.092513.132329	09/25/13 13:23	01
MW1-2	L13090607-06	P2.092513.132630	09/25/13 13:26	01
MW2-3	L13090607-11	P2.092513.132935	09/25/13 13:29	01
35B WW05	L13090607-14	P2.092513.133237	09/25/13 13:32	01
MW-58	L13090607-15	P2.092513.133441	09/25/13 13:34	01

Report Name: BLANK_SUMMARY
PDF File ID: 3090702
Report generated 09/30/2013 10:12

METHOD BLANK SUMMARY

Login Number: L13090607
Work Group: WG445519
Blank File ID: P2.092213.144927
Blank Sample ID: WG445419-02
Prep Date: 09/20/13 13:47
Instrument ID: PE-ICP2
Analyzed Date: 09/22/13 14:49
Method: 6010B
Analyst: MMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG445419-03	P2.092213.145226	09/22/13 14:52	01
FLT_BLK	WG445419-04	P2.092213.151723	09/22/13 15:17	01
MW3-1	L13090607-16	P2.092213.153830	09/22/13 15:38	01
MW3-1D	L13090607-17	P2.092213.154642	09/22/13 15:46	01
MW3-2	L13090607-18	P2.092213.154947	09/22/13 15:49	01
MW3-3	L13090607-19	P2.092213.155247	09/22/13 15:52	01
35BWW04	L13090607-20	P2.092213.155547	09/22/13 15:55	01
35BWW14	L13090607-23	P2.092213.155848	09/22/13 15:58	01
35BWW14MS	L13090607-24	P2.092213.160152	09/22/13 16:01	01
35BWW14MSD	L13090607-25	P2.092213.160357	09/22/13 16:03	01

Report Name: BLANK_SUMMARY
PDF File ID: 3090702
Report generated 09/30/2013 10:12

METHOD BLANK SUMMARY

Login Number: L13090607
Work Group: WG446021
Blank File ID: P2.092613.155530
Blank Sample ID: WG445723-03
Prep Date: 09/24/13 07:41
Instrument ID: PE-ICP2
Analyzed Date: 09/26/13 15:55
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG445723-04	P2.092613.155831	09/26/13 15:58	01
35BWW11	L13090607-21	P2.092613.160036	09/26/13 16:00	DL01
35BWW07	L13090607-22	P2.092613.160241	09/26/13 16:02	01
FIELD BLANK 9 SEPT 2013	L13090607-27	P2.092613.160546	09/26/13 16:05	01
MW4-1	L13090607-28	P2.092613.160848	09/26/13 16:08	01
MW4-1D	L13090607-29	P2.092613.161153	09/26/13 16:11	01
MW4-2	L13090607-30	P2.092613.161458	09/26/13 16:14	01
MW4-3	L13090607-31	P2.092613.162815	09/26/13 16:28	01
35BWW11	L13090607-21	P2.092913.125614	09/29/13 12:56	01

Report Name: BLANK_SUMMARY
PDF File ID: 3090702
Report generated 09/30/2013 10:12

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/18/13 13:12 Sample ID: WG445115-02
Instrument ID: PE-ICP2 Run Date: 09/19/13 11:11 Prep Method: 3015
File ID: P2.091913.111127 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG445227 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-19-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3090703
27-SEP-2013 09:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/20/13 13:47 Sample ID: WG445419-02
Instrument ID: PE-ICP2 Run Date: 09/22/13 14:49 Prep Method: 3015
File ID: P2.092213.144927 Analyst: MMB Method: 6010B
Workgroup (AAB#): WG445519 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-22-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3090703
27-SEP-2013 09:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/24/13 07:41 Sample ID: WG445723-03
Instrument ID: PE-ICP2 Run Date: 09/26/13 15:55 Prep Method: 3015
File ID: P2.092613.155530 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG446021 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-26-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3090703
27-SEP-2013 09:16

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/19/2013 Sample ID: WG445115-03
Instrument ID: PE-ICP2 Run Time: 11:14 Prep Method: 3015
File ID: P2.091913.111429 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG445227 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD59891 Cal ID: PE-ICP-19-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.04	96.6	85 - 115	
Calcium, Total	6.25	6.39	102	85 - 115	
Iron, Total	2.50	2.47	98.7	85 - 115	
Magnesium, Total	6.25	6.39	102	85 - 115	
Potassium, Total	31.3	30.2	96.7	85 - 115	
Sodium, Total	31.3	30.1	96.4	85 - 115	
Strontium, Total	0.625	0.635	102	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3090704
Report generated: 09/27/2013 09:16

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/22/2013 Sample ID: WG445419-03
Instrument ID: PE-ICP2 Run Time: 14:52 Prep Method: 3015
File ID: P2.092213.145226 Analyst: MMB Method: 6010B
Workgroup (AAB#): WG445519 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD60182 Cal ID: PE-ICP-22-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	5.95	95.3	85 - 115	
Calcium, Total	6.25	6.39	102	85 - 115	
Iron, Total	2.50	2.39	95.6	85 - 115	
Magnesium, Total	6.25	6.03	96.5	85 - 115	
Potassium, Total	31.3	30.0	95.9	85 - 115	
Sodium, Total	31.3	31.3	100	85 - 115	
Strontium, Total	0.625	0.590	94.4	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3090704
Report generated: 09/27/2013 09:16

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/26/2013 Sample ID: WG445723-04
Instrument ID: PE-ICP2 Run Time: 15:58 Prep Method: 3015
File ID: P2.092613.155831 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG446021 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD60182 Cal ID: PE-ICP-26-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.16	98.5	85 - 115	
Calcium, Total	6.25	6.34	101	85 - 115	
Iron, Total	2.50	2.32	92.9	85 - 115	
Magnesium, Total	6.25	5.97	95.5	85 - 115	
Potassium, Total	31.3	32.1	103	85 - 115	
Sodium, Total	31.3	33.5	107	85 - 115	
Strontium, Total	0.625	0.639	102	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3090704
Report generated: 09/27/2013 09:16

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13090607 Cal ID:PE-ICP2- 19-SEP-13 Worknum:WG445227

Instrument ID:PE-ICP2 Contract #: Prep Method:3015

Parent ID:L13090607-07 File ID:P2.091913.112141 Dil:1 Method:6010B

Sample ID:L13090607-08 MS File ID:P2.091913.112443 Dil:1 Matrix:Water

Sample ID:L13090607-09 MSD File ID:P2.091913.112648 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.205	6.25	6.19	95.8	6.25	6.49	101	4.70	80 - 120	20	
Calcium, Total	6.05	6.25	12.2	98.3	6.25	12.7	106	3.74	80 - 120	20	
Iron, Total	0.243	2.50	2.58	93.5	2.50	2.69	98	4.28	80 - 120	20	
Magnesium, Total	2.38	6.25	8.33	95.2	6.25	8.56	98.8	2.63	80 - 120	20	
Potassium, Total	1.06	31.3	30.8	95.3	31.3	32.5	101	5.15	80 - 120	20	
Sodium, Total	31.5	31.3	63.5	102	31.3	64.5	105	1.48	80 - 120	20	
Strontium, Total	0.169	0.625	0.796	100	0.625	0.791	99.6	0.533	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 3090705
Report generated 09/26/2013 08:17

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13090607 Cal ID:PE-ICP2- 22-SEP-13 Worknum:WG445519

Instrument ID:PE-ICP2 Contract #: Prep Method:3015

Parent ID:L13090607-23 File ID:P2.092213.155848 Dil:1 Method:6010B

Sample ID:L13090607-24 MS File ID:P2.092213.160152 Dil:1 Matrix:Water

Sample ID:L13090607-25 MSD File ID:P2.092213.160357 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	5.80	92.7	6.25	6.10	97.5	5.04	80 - 120	20	
Calcium, Total	12.7	6.25	19.5	108	6.25	20.6	126	5.69	80 - 120	20	*
Iron, Total	ND	2.50	2.42	96.7	2.50	2.49	99.7	3.07	80 - 120	20	
Magnesium, Total	6.76	6.25	12.8	97.3	6.25	13.5	108	5.05	80 - 120	20	
Potassium, Total	0.914	31.3	30.3	94.1	31.3	31.5	98	3.97	80 - 120	20	
Sodium, Total	83.4	31.3	113	93.9	31.3	116	105	3.16	80 - 120	20	
Strontium, Total	0.456	0.625	1.07	98.5	0.625	1.11	105	3.72	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3090705

Report generated 09/26/2013 08:17

Loginnum:L13090607 Cal ID:PE-ICP2- Worknum:WG446021
Instrument ID:PE-ICP2 Contract #: Method:6010B
Parent ID:WG445723-01 File ID:P2.092613.164020 Dil:1 Matrix:WATER
Sample ID:WG445723-05 MS File ID:P2.092613.164321 Dil:1 Units:mg/L
Sample ID:WG445723-06 MSD File ID:P2.092613.164526 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum	ND	6.25	5.83	93.3	6.25	5.86	93.8	0.538	80 - 120	20	
Calcium	47.9	6.25	58.9	176	6.25	60.0	192	1.73	80 - 120	20	*
Iron	0.436	2.50	2.67	89.3	2.50	2.71	90.8	1.33	80 - 120	20	
Magnesium	7.68	6.25	13.6	94.4	6.25	13.6	94.5	0.0678	80 - 120	20	
Potassium	3.44	31.3	34.0	97.7	31.3	33.6	96.6	1.04	80 - 120	20	
Sodium	7.39	31.3	38.1	98.4	31.3	38.7	100	1.47	80 - 120	20	
Strontium	0.184	0.625	0.782	95.6	0.625	0.787	96.5	0.720	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3106173
Report generated 09/27/2013 15:46

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L13090607 Cal ID: PE-ICP2- Worknum:WG446021
Instrument ID:PE-ICP2 Contract #: Method:6010B
Parent ID:WG445723-02 File ID:P2.092613.165033 Dil:1 Matrix:WATER
Sample ID:WG445723-07 MS File ID:P2.092613.165841 Dil:1 Units:mg/L
Sample ID:WG445723-08 MSD File ID:P2.092613.170046 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum	ND	6.25	5.97	95.5	6.25	6.07	97.1	1.58	80 - 120	20	
Calcium	60.6	6.25	67.9	116	6.25	70.8	163	4.17	80 - 120	20	*
Iron	0.448	2.50	2.80	94.0	2.50	2.79	93.6	0.336	80 - 120	20	
Magnesium	18.5	6.25	23.4	78.6	6.25	24.0	87.9	2.46	80 - 120	20	*
Potassium	1.69	31.3	32.4	98.1	31.3	33.2	101	2.70	80 - 120	20	
Sodium	16.1	31.3	46.6	97.7	31.3	47.9	102	2.78	80 - 120	20	
Strontium	0.216	0.625	0.801	93.6	0.625	0.814	95.7	1.60	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3106173
Report generated 09/27/2013 15:46

METHOD BLANK SUMMARY

Login Number: L13090607
Work Group: WG445210
Blank File ID: NI.091913.102406
Blank Sample ID: WG444931-03
Prep Date: 09/17/13 10:43
Instrument ID: ICP-MS2
Analyzed Date: 09/19/13 10:24
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
FLT_BLK	WG444931-05	NI.091913.103015	09/19/13 10:30	01
LCS	WG444931-04	NI.091913.103319	09/19/13 10:33	01
MW2-1	L13090607-07	NI.091913.103624	09/19/13 10:36	01
MW2-1 MS	L13090607-08	NI.091913.103928	09/19/13 10:39	01
MW2-1 MSD	L13090607-09	NI.091913.104233	09/19/13 10:42	01
35BWW09	L13090607-01	NI.091913.111018	09/19/13 11:10	01
35BWW08	L13090607-02	NI.091913.111324	09/19/13 11:13	01
MW1-1	L13090607-03	NI.091913.111628	09/19/13 11:16	01
FIELD BLANK 4 SEPT 2013	L13090607-05	NI.091913.111933	09/19/13 11:19	01
DUP	WG444931-08	NI.091913.113803	09/19/13 11:38	01

Report Name: BLANK_SUMMARY
PDF File ID: 3091317
Report generated 09/19/2013 15:12

METHOD BLANK SUMMARY

Login Number: L13090607
Blank File ID: NI.091913.121331
Prep Date: 09/18/13 08:56
Analyzed Date: 09/19/13 12:13
Analyst: JYH

Work Group: WG445239
Blank Sample ID: WG445067-02
Instrument ID: ICP-MS2
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG445067-03	NI.091913.122841	09/19/13 12:28	01
35BWW14	L13090607-23	NI.091913.123146	09/19/13 12:31	01
35BWW14MS	L13090607-24	NI.091913.123450	09/19/13 12:34	01
35BWW14MSD	L13090607-25	NI.091913.123755	09/19/13 12:37	01
MW1-2	L13090607-06	NI.091913.125931	09/19/13 12:59	01
MW2-2	L13090607-10	NI.091913.130235	09/19/13 13:02	01
MW2-3	L13090607-11	NI.091913.130539	09/19/13 13:05	01
35B WW05	L13090607-14	NI.091913.130844	09/19/13 13:08	01
MW-58	L13090607-15	NI.091913.131148	09/19/13 13:11	01
MW3-1	L13090607-16	NI.091913.131452	09/19/13 13:14	01
MW3-1D	L13090607-17	NI.091913.131757	09/19/13 13:17	01
MW3-2	L13090607-18	NI.091913.132101	09/19/13 13:21	01
MW3-3	L13090607-19	NI.091913.132405	09/19/13 13:24	01
35BWW04	L13090607-20	NI.091913.132710	09/19/13 13:27	01
35BWW11	L13090607-21	NI.091913.133627	09/19/13 13:36	01
35BWW07	L13090607-22	NI.091913.133932	09/19/13 13:39	01
FIELD BLANK 9 SEPT 2013	L13090607-27	NI.091913.134236	09/19/13 13:42	01
MW4-1	L13090607-28	NI.091913.134540	09/19/13 13:45	01
MW4-1D	L13090607-29	NI.091913.134845	09/19/13 13:48	01
MW4-2	L13090607-30	NI.091913.135149	09/19/13 13:51	01
MW4-3	L13090607-31	NI.091913.135453	09/19/13 13:54	01
MW4-1	L13090607-28	NI.091913.141416	09/19/13 14:14	DL01
MW2-2	L13090607-10	NI.091913.142402	09/19/13 14:24	DL01
MW4-1D	L13090607-29	NI.091913.142706	09/19/13 14:27	DL01
MW4-2	L13090607-30	NI.091913.143011	09/19/13 14:30	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3091317
Report generated 09/19/2013 15:12

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/17/13 10:43 Sample ID: WG444931-03
Instrument ID: ICP-MS2 Run Date: 09/19/13 10:24 Prep Method: 3015
File ID: NI.091913.102406 Analyst: JYH Method: 6020
Workgroup (AAB#): WG445210 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-19-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3091318
19-SEP-2013 15:12

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13090607 Prep Date: 09/18/13 08:56 Sample ID: WG445067-02
Instrument ID: ICP-MS2 Run Date: 09/19/13 12:13 Prep Method: 3015
File ID: NI.091913.121331 Analyst: JYH Method: 6020
Workgroup (AAB#): WG445239 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-19-SEP-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3091318
19-SEP-2013 15:12

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/19/2013 Sample ID: WG444931-04
Instrument ID: ICP-MS2 Run Time: 10:33 Prep Method: 3015
File ID: NI.091913.103319 Analyst: JYH Method: 6020
Workgroup (AAB#): WG445210 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD59140 Cal ID: ICP-MS-19-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0632	101	80 - 120	
Barium, Total	0.0625	0.0645	103	80 - 120	
Cadmium, Total	0.0625	0.0643	103	80 - 120	
Chromium, Total	0.0625	0.0664	106	80 - 120	
Copper, Total	0.0625	0.0669	107	80 - 120	
Lead, Total	0.0625	0.0639	102	80 - 120	
Manganese, Total	0.0625	0.0659	105	80 - 120	
Nickel, Total	0.0625	0.0653	105	80 - 120	
Selenium, Total	0.0625	0.0636	102	80 - 120	
Thallium, Total	0.0625	0.0641	103	80 - 120	
Vanadium, Total	0.0625	0.0641	103	80 - 120	
Zinc, Total	0.0625	0.0701	112	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3091319
Report generated: 09/19/2013 15:12

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13090607 Run Date: 09/19/2013 Sample ID: WG445067-03
Instrument ID: ICP-MS2 Run Time: 12:28 Prep Method: 3015
File ID: NI.091913.122841 Analyst: JYH Method: 6020
Workgroup (AAB#): WG445239 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD59140 Cal ID: ICP-MS-19-SEP-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0650	104	80 - 120	
Barium, Total	0.0625	0.0630	101	80 - 120	
Cadmium, Total	0.0625	0.0635	102	80 - 120	
Chromium, Total	0.0625	0.0622	99.6	80 - 120	
Copper, Total	0.0625	0.0640	102	80 - 120	
Lead, Total	0.0625	0.0646	103	80 - 120	
Manganese, Total	0.0625	0.0617	98.7	80 - 120	
Nickel, Total	0.0625	0.0628	100	80 - 120	
Selenium, Total	0.0625	0.0630	101	80 - 120	
Thallium, Total	0.0625	0.0645	103	80 - 120	
Vanadium, Total	0.0625	0.0624	99.9	80 - 120	
Zinc, Total	0.0625	0.0675	108	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3091319
Report generated: 09/19/2013 15:12

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13090607 Cal ID: ICP-MS2- 19-SEP-13 Worknum:WG445210

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13090607-07 File ID:NI.091913.103624 Dil:1 Method:6020

Sample ID:L13090607-08 MS File ID:NI.091913.103928 Dil:1 Matrix:Water

Sample ID:L13090607-09 MSD File ID:NI.091913.104233 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	0.000695	0.0625	0.0642	102	0.0625	0.0657	104	2.39	75 - 125	20	
Barium, Total	0.0611	0.0625	0.121	96.6	0.0625	0.123	99.8	1.59	75 - 125	20	
Cadmium, Total	0.000631	0.0625	0.0636	101	0.0625	0.0654	104	2.85	75 - 125	20	
Chromium, Total	ND	0.0625	0.0631	101	0.0625	0.0658	105	4.28	75 - 125	20	
Copper, Total	ND	0.0625	0.0645	103	0.0625	0.0660	106	2.18	75 - 125	20	
Lead, Total	ND	0.0625	0.0638	102	0.0625	0.0649	104	1.71	75 - 125	20	
Manganese, Total	0.103	0.0625	0.161	91.7	0.0625	0.161	91.9	0.101	75 - 125	20	
Nickel, Total	0.00219	0.0625	0.0641	99.1	0.0625	0.0665	103	3.72	75 - 125	20	
Selenium, Total	0.00230	0.0625	0.0658	102	0.0625	0.0678	105	2.92	75 - 125	20	
Thallium, Total	ND	0.0625	0.0643	103	0.0625	0.0654	105	1.62	75 - 125	20	
Vanadium, Total	0.000755	0.0625	0.0632	100	0.0625	0.0647	102	2.31	75 - 125	20	
Zinc, Total	0.0302	0.0625	0.0739	69.9	0.0625	0.0732	68.8	0.950	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 3091320
Report generated 09/19/2013 15:30

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13090607 Cal ID: ICP-MS2- 19-SEP-13 Worknum:WG445239

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13090607-23 File ID:NI.091913.123146 Dil:1 Method:6020

Sample ID:L13090607-24 MS File ID:NI.091913.123450 Dil:1 Matrix:Water

Sample ID:L13090607-25 MSD File ID:NI.091913.123755 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0693	111	0.0625	0.0688	110	0.620	75 - 125	20	
Barium, Total	0.0454	0.0625	0.112	106	0.0625	0.110	104	1.23	75 - 125	20	
Cadmium, Total	ND	0.0625	0.0657	105	0.0625	0.0655	105	0.267	75 - 125	20	
Chromium, Total	ND	0.0625	0.0639	102	0.0625	0.0623	99.7	2.57	75 - 125	20	
Copper, Total	0.00137	0.0625	0.0665	104	0.0625	0.0658	103	0.997	75 - 125	20	
Lead, Total	ND	0.0625	0.0674	108	0.0625	0.0670	107	0.543	75 - 125	20	
Manganese, Total	0.0319	0.0625	0.0953	101	0.0625	0.0938	99	1.59	75 - 125	20	
Nickel, Total	ND	0.0625	0.0663	106	0.0625	0.0644	103	2.99	75 - 125	20	
Selenium, Total	0.00163	0.0625	0.0720	113	0.0625	0.0707	111	1.71	75 - 125	20	
Thallium, Total	ND	0.0625	0.0684	109	0.0625	0.0682	109	0.301	75 - 125	20	
Vanadium, Total	0.000515	0.0625	0.0652	104	0.0625	0.0651	103	0.230	75 - 125	20	
Zinc, Total	ND	0.0625	0.0791	127	0.0625	0.0767	123	3.09	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3091320

Report generated 09/19/2013 15:30

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
September 30, 2013

001 - BIO-CHEM TESTING WVDEP 220	002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental	004 - MICROBAC PITTSBURGH
ADC - ANTHONY D. CANTER	ADG - APRIL D. GREENE
AJF - AMANDA J. FICKIESEN	AML - TONY M. LONG
AZH - AFTER HOURS	BAF - BRICE A. FENTON
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN	CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS	CRW - CHRISTINA R. WILSON
CSH - CHRIS S. HILL	CTB - CHRIS T. BUCINA
DAK - DEAN A. K	DCM - DAVID C. MERCKLE
DDE - DEBRA D. ELLIOTT	DEV - DAVID E. VANDENBERG
DIH - DEANNA I. HESSON	DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON
EDL - ERIN D. LONG	ENY - EMILY N. YOAK
EPT - ETHAN P. TIDD	ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN	HJR - HOLLY J. REED
JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON
JKS - JANE K. SCHAAD	JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KDW - KATHRYN D. WELCH
KEB - KATIE E. BARNES	KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON	KRB - KAELY R. BECKER
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA
MDA - MIKE D. ALBERTSON	MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING	MLW - MATTHEW L. WARREN
MMB - MAREN M. BEERY	MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE	PSW - PEGGY S. WEBB
QX - QIN XU	RAH - ROY A. HALSTEAD
REK - BOB E. KYER	RLB - BOB BUCHANAN
RNP - RICK N. PETTY	RS - ROSEMARY SCOTT
RWC - RODNEY W. CAMPBELL	SAV - SARAH A. VANDENBERG
SEP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	TPA - TYLER P. AMRINE
VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG	XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
September 30, 2013

Qualkey: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated value; the analyte concentration was less than the RL/LOQ.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL/MDL).
ND, H1	Not detected; Sample analysis performed past holding time.
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 35789

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 3083.001 / B66490

Sampler (print): CARL JOHNSON JR | Signature:

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
35B WW09		X	9-4-2013	0900	GW	4	S	3	1		
35B WW08		X	9-4-2013	1625	GW	4	S	3	1		
MW 1-1		X	9-4-2013	1130	GW	4	S	3	1		
TRIP BLANK 4 Sept 2013		X	9-4-2013	1225	-	2	S	2			
FIELD BLANK 4 Sept 2013		X	9-4-2013	1240	-	4	S	3	1		
MW 1-2		X	9-4-2013	1430	GW	4	S	3	1		
MW 2-1		X	9-5-2013	0930	GW	4	S	3	1		
MW 2-1 MS		X	9-5-2013	0940	GW	4	S	3	1		
MW 2-1 MSD		X	9-5-2013	0950	GW	4	S	3	1		
MW 2-2		X	9-5-2013	1320	GW	4	S	3	1		
MW 2-3		X	9-5-2013	1445	GW	4	S	3	1		
TRIP BLANK 5 Sept 2013		X	9-5-2013	-	-	2	S	2			
TRIP BLANK 6 Sept 2013		X	9-6-2013	-	-	2	S	2			
35B WW05		X	9-6-2013	0910	GW	4	S	3	1		
MW 58		X	9-6-2013	1015	GW	4	S	3	1		
MW 3-1		X	9-6-2013	1300	GW	4	S	3	1		
MW 3-1 D		X	9-6-2013	1315	GW	4	S	3	1		
MW 3-2		X	9-6-2013	1420	GW	4	S	3	1		
MW 3-3		X	9-6-2013	1540	GW	4	S	3	1		
35BWW04		X	9-9-2013	0830	GW	4	S	3	1		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)
	9-11-2013	1360		
Relinquished by: (Signature)	**Date**	**Time**	**Received for Laboratory by: (Signature)**	**Date**

Microbac OVD
Received: 09/12/2013 11:46
By: ROSEMARY SCOTT
221000041720

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00838395

COC No. A 35788

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 30B3.001 / B66490

Sampler (print): CARL JOHNSON JR | Signature: Carl Johnson

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)
35B WW11		X	9-9-2013	0930	GW	4	S	3	1	
35B WW07		X	9-9-2013	1115	GW	4	S	3	1	
35B WW14		X	9-9-2013	1330	GW	4	S	3	1	
35B WW14MS		X	9-9-2013	1345	GW	4	S	3	1	
35B WW14MSD		X	9-9-2013	1355	GW	4	S	3	1	
TRIP BLANK 9 Sept 2013		X	9-9-2013	—	—	2	S	2		
FIELD BLANK 9 Sept 2013		X	9-9-2013	1400	—	4	S	3	1	
MW4-1		X	9-10-2013	0900	GW	4	S	3	1	
MW4-1D		X	9-10-2013	0915	GW	4	S	3	1	
MW4-2		X	9-10-2013	1015	GW	4	S	3	1	
MW4-3		X	9-10-2013	1130	GW	4	S	3	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Carl Johnson	9-11-2013	1200	Microbac OVD Received: 09/12/2013 11:46 By: ROSEMARY SCOTT 221000041720		
Relinquished by: (Signature)	Date	Time	Received by: (Signature)		

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00838396

NELAP Addendum - April 25, 2013

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Nitroguanidine
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL KNITRO-C-WUV-VIS

Nitrocellulose

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL HPLCOS-HPLC-UV

Nitroguanidine

OVL KNITRO-C-S/UV-VIS

Nitrocellulose

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L13120753

Gene Fabian
Aberdeen Test Center
US Army Aberdeen Center
Aberdeen Proving Ground, MD 21005

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Kathy Albertson – Team Chemist/Data Specialist
(740) 373-4071
Kathy.Albertson@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on December 31 2013

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: Microbac OVD

Microbac

Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
0017593	I	2.0		1015923831660004575000797371509298	X
00110337	I	1.0		1015923831660004575000797371509287	X
0015015	I	2.0		801944416686	X
00110543	I	1.0		1015923831660004575000797371509276	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
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Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35B WW09	L13120753-01	12/04/2013 09:00	12/12/2013 10:44
35B WW08	L13120753-02	12/04/2013 10:15	12/12/2013 10:44
MW1-1	L13120753-03	12/04/2013 11:10	12/12/2013 10:44
MW1-1	L13120753-04	12/04/2013 11:15	12/12/2013 10:44
MW1-1	L13120753-05	12/04/2013 11:20	12/12/2013 10:44
TRIP BLANK 4DEC 2013	L13120753-06	12/04/2013 00:01	12/12/2013 10:44
MW1-2	L13120753-07	12/04/2013 14:30	12/12/2013 10:44
FIELD BLANK 4DEC2013	L13120753-08	12/04/2013 14:20	12/12/2013 10:44
35BWW10	L13120753-09	12/04/2013 16:00	12/12/2013 10:44
MW2-1	L13120753-10	12/04/2013 17:00	12/12/2013 10:44
MW2-2	L13120753-11	12/05/2013 09:20	12/12/2013 10:44
MW2-3	L13120753-12	12/05/2013 10:45	12/12/2013 10:44
MW3-1	L13120753-13	12/05/2013 13:00	12/12/2013 10:44
TRIP BLANK 5DEC 2013	L13120753-14	12/05/2013 00:01	12/12/2013 10:44
MW3-2	L13120753-15	12/06/2013 09:15	12/12/2013 10:44
MW3-2D	L13120753-16	12/06/2013 09:30	12/12/2013 10:44
MW3-3	L13120753-17	12/06/2013 11:00	12/12/2013 10:44
TRIP BLANK 6DEC 2013	L13120753-18	12/06/2013 00:01	12/12/2013 10:44
MW-58	L13120753-19	12/06/2013 13:00	12/12/2013 10:44
35B WW03	L13120753-20	12/06/2013 14:30	12/12/2013 10:44
35B WW20	L13120753-21	12/09/2013 08:45	12/12/2013 10:44
35B WW04	L13120753-22	12/09/2013 10:00	12/12/2013 10:44
FIELD BLANK 9DEC 2013	L13120753-23	12/09/2013 09:30	12/12/2013 10:44
35B WW12	L13120753-24	12/09/2013 11:15	12/12/2013 10:44
35B WW05	L13120753-25	12/09/2013 13:20	12/12/2013 10:44
35B WW06	L13120753-26	12/09/2013 14:30	12/12/2013 10:44
MW 4-1	L13120753-27	12/10/2013 09:00	12/12/2013 10:44
MW 4-1D	L13120753-28	12/10/2013 09:15	12/12/2013 10:44
TRIP BLANK 10DEC 2013	L13120753-29	12/10/2013 00:01	12/12/2013 10:44
MW 4-2	L13120753-30	12/10/2013 10:30	12/12/2013 10:44
35B WW14	L13120753-31	12/10/2013 12:40	12/12/2013 10:44
35B WW14 MS	L13120753-32	12/10/2013 12:50	12/12/2013 10:44
35B WW14 MSD	L13120753-33	12/10/2013 13:00	12/12/2013 10:44
35B WW17	L13120753-34	12/10/2013 14:00	12/12/2013 10:44

Microbac Laboratories
Case Narrative

Login Number: L13120753
Department: Volatiles
Analyst: Anthony Canter

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: The percent difference was out of range for the following analytes: acetone, 2-chloroethylvinyl ether, dichlorodifluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Recoveries out of range were observed for the following analytes: Tetrachloroethene, 1,1,2,2-Tetrachloroethane, 2-Hexanone, Dichlorodifluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

Matrix Spikes: Recoveries out of range were observed for the following analytes: 2-chloroethyl vinyl ether, 1,1,2,2-

tetrachloroethane, 1,1-dichloroethene, 1,2-dibromo-3-chloropropane, 1,3-dichlorobenzene, 4-chlorotoluene, p-isopropyltoluene, s-butylbenzene, trichloroethene. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 76941
Approved By: Michael Albertson

Microbac Laboratories
Case Narrative

Login Number: L13120753
Department: Metals
Analyst: Qin Xu
Analyst #2: Pierce Morris

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: WG457227 - Due to continuing calibration verification failure for magnesium on 20-DEC-2013 at 19:47, client samples 01 through 16 were reanalyzed on a later calibration which was compliant for magnesium.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG457252 - All acceptance criteria were met.

WG457227 - All acceptance criteria were met.

Matrix Spikes: WG457227 - Sample 03 was chosen by the client for MS/MSD analysis. Samples 04(MS) and 05(MSD) met all acceptance criteria.

WG457252 - Sample 31 was chosen by the client for MS/MSD analysis. Samples 32(MS) and 33(MSD) yielded a noncompliant recovery for one analyte.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 76993
Approved By: Sheri Pfalzgraf

Microbac Laboratories
Case Narrative

Login Number: L13120753
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG456830 - All acceptance criteria were met.

WG457079 - All acceptance criteria were met.

WG457194 - All acceptance criteria were met.

Matrix Spikes: WG456830 - Sample 03 was chosen by the client for MS/MSD analysis. Samples 04(MS) and 05(MSD) met all acceptance criteria.

WG457194 - Sample 31 was chosen by the client for MS/MSD analysis. Samples 32(MS) and 33(MSD) met all acceptance criteria.

SAMPLES

Samples: WG457079 - Client sample 11 required dilution analysis in order to obtain results for barium and zinc within the linear range.

WG457194 - Client sample 21 required dilution analysis in order to obtain a result for barium within the linear range. Client samples 26, 27 and 28 required dilution analyses in order to obtain results for manganese within the linear range.

Narrative ID: 76684
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35B WW09	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/13/2013 21:32
Workgroup #:	WG456453	**Analyst:**	MES	**Run Date:**	12/16/2013 18:33
Collect Date:	12/04/2013 09:00	**Dilution:**	1	**File ID:**	8M393374
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.568	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	54.3		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	92.6	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	89.1	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-01 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35B WW09 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:52
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/20/2013 09:32
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/20/2013 19:23
Collect Date: 12/04/2013 09:00 **Dilution:** 1 **File ID:** T2.122013.192308
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	56.8		0.500	0.250
Iron, Total	7439-89-6	0.357		0.100	0.0500
Potassium, Total	7440-09-7	2.87		1.00	0.500
Sodium, Total	7440-23-5	182		0.500	0.250
Strontium, Total	7440-24-6	1.99		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-01 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35B WW09 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:52
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/30/2013 10:10
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/30/2013 13:40
Collect Date: 12/04/2013 09:00 **Dilution:** 1 **File ID:** T2.123013.134046
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	32.7		0.500	0.250

Sample #: L13120753-01 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW09 **Prep Method:** 3015 **Prep Date:** 12/18/2013 08:28
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/18/2013 11:12
Workgroup #: WG456830 **Analyst:** JYH **Run Date:** 12/18/2013 12:55
Collect Date: 12/04/2013 09:00 **Dilution:** 1 **File ID:** NI.121813.125549
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0516		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000347	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.0174		0.00200	0.00100
Copper, Total	7440-50-8	0.00334		0.00200	0.00100

Microbac

Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.116		0.00200	0.00100
Nickel, Total	7440-02-0	0.0137		0.00400	0.00200
Selenium, Total	7782-49-2	0.00431		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-02
Client ID: 35B WW08
Matrix: Water
Workgroup #: WG456453
Collect Date: 12/04/2013 10:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: MES
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/13/2013 21:32
Run Date: 12/16/2013 19:05
File ID: 8M393375

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

Microbac

Lab Report #: L13120753
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Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	39.7		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	89.4	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	87.8	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-02
Client ID: 35B WW08
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/04/2013 10:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:52
Cal Date: 12/20/2013 09:32
Run Date: 12/20/2013 19:26
File ID: T2.122013.192639

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	21.2		0.500	0.250
Iron, Total	7439-89-6	0.0671	J	0.100	0.0500
Potassium, Total	7440-09-7	1.48		1.00	0.500
Sodium, Total	7440-23-5	119		0.500	0.250
Strontium, Total	7440-24-6	0.806		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-02
Client ID: 35B WW08
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/04/2013 10:15
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:52
Cal Date: 12/30/2013 10:10
Run Date: 12/30/2013 13:44
File ID: T2.123013.134417

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	13.6		0.500	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35B WW08	**Prep Method:**	3015	**Prep Date:**	12/18/2013 08:28
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/18/2013 11:12
Workgroup #:	WG456830	**Analyst:**	JYH	**Run Date:**	12/18/2013 12:58
Collect Date:	12/04/2013 10:15	**Dilution:**	1	**File ID:**	NI.121813.125854
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0436		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00117		0.000600	0.000300
Chromium, Total	7440-47-3	0.00109	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00214		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0201		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0418		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000879	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13120753-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW1-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/13/2013 21:32
Workgroup #:	WG456453	**Analyst:**	MES	**Run Date:**	12/16/2013 17:30
Collect Date:	12/04/2013 11:10	**Dilution:**	1	**File ID:**	8M393372
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Report #: L13120753
Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.09		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.3	86	118	
1,2-Dichloroethane-d4	86.8	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	86.6	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-03
Client ID: MW1-1
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/04/2013 11:10
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:52
Cal Date: 12/30/2013 10:10
Run Date: 12/30/2013 13:47
File ID: T2.123013.134748

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	7.20		0.500	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW1-1	**Prep Method:**	3015	**Prep Date:**	12/20/2013 10:52
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	12/20/2013 09:32
Workgroup #:	WG457227	**Analyst:**	QX	**Run Date:**	12/20/2013 19:30
Collect Date:	12/04/2013 11:10	**Dilution:**	1	**File ID:**	T2.122013.193009
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.360		0.200	0.100
Calcium, Total	7440-70-2	12.8		0.500	0.250
Iron, Total	7439-89-6	0.202		0.100	0.0500
Potassium, Total	7440-09-7	3.31		1.00	0.500
Sodium, Total	7440-23-5	109		0.500	0.250
Strontium, Total	7440-24-6	0.441		0.0500	0.0250

Sample #:	L13120753-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW1-1	**Prep Method:**	3015	**Prep Date:**	12/18/2013 08:28
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/18/2013 11:12
Workgroup #:	WG456830	**Analyst:**	JYH	**Run Date:**	12/18/2013 13:01
Collect Date:	12/04/2013 11:10	**Dilution:**	1	**File ID:**	NI.121813.130158
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0598		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000314	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00982		0.00200	0.00100
Copper, Total	7440-50-8	0.00277		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00481		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0113		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00352		0.00100	0.000500
Zinc, Total	7440-66-6	0.0158	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-04	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW1-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/13/2013 21:32
Workgroup #:	WG456453	**Analyst:**	MES	**Run Date:**	12/16/2013 13:39
Collect Date:	12/04/2013 11:15	**Dilution:**	1	**File ID:**	8M393365
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	15.8		10.0	2.50
Benzene	71-43-2	19.5		1.00	0.125
Bromobenzene	108-86-1	22.1		1.00	0.125
Bromochloromethane	74-97-5	23.6		1.00	0.200
Bromodichloromethane	75-27-4	20.8		1.00	0.250
Bromoform	75-25-2	22.4		1.00	0.500
Bromomethane	74-83-9	18.9		1.00	0.500
2-Butanone	78-93-3	12.4		10.0	2.50
n-Butylbenzene	104-51-8	19.9		1.00	0.250
sec-Butylbenzene	135-98-8	21.5		1.00	0.250
tert-Butylbenzene	98-06-6	21.8		1.00	0.250
Carbon disulfide	75-15-0	18.1		1.00	0.500
Carbon tetrachloride	56-23-5	22.3		1.00	0.250
Chlorobenzene	108-90-7	22.5		1.00	0.125
Chlorodibromomethane	124-48-1	22.5		1.00	0.250
Chloroethane	75-00-3	18.1		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.3		1.00	0.125
Chloromethane	74-87-3	16.9		1.00	0.500
2-Chlorotoluene	95-49-8	20.9		1.00	0.125
4-Chlorotoluene	106-43-4	20.2		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	15.5		5.00	1.00
1,2-Dibromoethane	106-93-4	19.8		1.00	0.250
Dibromomethane	74-95-3	20.8		1.00	0.250
1,2-Dichlorobenzene	95-50-1	22.2		1.00	0.125
1,3-Dichlorobenzene	541-73-1	22.6		1.00	0.250
1,4-Dichlorobenzene	106-46-7	21.2		1.00	0.125
Dichlorodifluoromethane	75-71-8	27.2		1.00	0.250
1,1-Dichloroethane	75-34-3	18.9		1.00	0.125
1,2-Dichloroethane	107-06-2	19.3		1.00	0.250
1,1-Dichloroethene	75-35-4	17.8		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.9		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	18.2		1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	17.8		1.00	0.200
1,3-Dichloropropane	142-28-9	18.0		1.00	0.200
2,2-Dichloropropane	594-20-7	23.3		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	21.2		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	19.1		1.00	0.500
1,1-Dichloropropene	563-58-6	19.7		1.00	0.250
Ethylbenzene	100-41-4	20.8		1.00	0.250
2-Hexanone	591-78-6	13.1		10.0	2.50
Hexachlorobutadiene	87-68-3	21.4		1.00	0.250
Isopropylbenzene	98-82-8	22.5		1.00	0.250
p-Isopropyltoluene	99-87-6	21.8		1.00	0.250
4-Methyl-2-pentanone	108-10-1	13.9		10.0	2.50
Methylene chloride	75-09-2	19.5		5.00	0.250
Naphthalene	91-20-3	19.0		1.00	0.200
n-Propylbenzene	103-65-1	20.3		1.00	0.125
Styrene	100-42-5	21.9		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.6		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	16.8		1.00	0.200
Tetrachloroethene	127-18-4	23.9		1.00	0.250
Toluene	108-88-3	20.4		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	20.0		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	21.5		1.00	0.200
1,1,1-Trichloroethane	71-55-6	22.5		1.00	0.250
1,1,2-Trichloroethane	79-00-5	20.0		1.00	0.250
Trichloroethene	79-01-6	26.3		1.00	0.250
Trichlorofluoromethane	75-69-4	21.8		1.00	0.250
1,2,3-Trichloropropane	96-18-4	18.5		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	21.0		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	21.6		1.00	0.250
Vinyl acetate	108-05-4	18.7		10.0	2.50
Vinyl chloride	75-01-4	21.5		1.00	0.250
o-Xylene	95-47-6	21.8		1.00	0.250
m-,p-Xylene	179601-23-1	43.8		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.9	86	118	
1,2-Dichloroethane-d4	88.2	80	120	
Toluene-d8	99.4	88	110	
4-Bromofluorobenzene	91.3	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW1-1	**Prep Method:**	3015	**Prep Date:**	12/20/2013 10:51
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	12/20/2013 09:32
Workgroup #:	WG457227	**Analyst:**	QX	**Run Date:**	12/20/2013 19:33
Collect Date:	12/04/2013 11:15	**Dilution:**	1	**File ID:**	T2.122013.193341
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.33		0.200	0.100
Calcium, Total	7440-70-2	18.4		0.500	0.250
Iron, Total	7439-89-6	2.60		0.100	0.0500
Potassium, Total	7440-09-7	34.3		1.00	0.500
Sodium, Total	7440-23-5	136		0.500	0.250
Strontium, Total	7440-24-6	1.05		0.0500	0.0250

Sample #:	L13120753-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW1-1	**Prep Method:**	3015	**Prep Date:**	12/20/2013 10:51
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	12/30/2013 10:10
Workgroup #:	WG457227	**Analyst:**	QX	**Run Date:**	12/30/2013 13:51
Collect Date:	12/04/2013 11:15	**Dilution:**	1	**File ID:**	T2.123013.135120
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	12.6		0.500	0.250

Sample #:	L13120753-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW1-1	**Prep Method:**	3015	**Prep Date:**	12/18/2013 08:27
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/18/2013 11:12
Workgroup #:	WG456830	**Analyst:**	JYH	**Run Date:**	12/18/2013 13:05
Collect Date:	12/04/2013 11:15	**Dilution:**	1	**File ID:**	NI.121813.130503
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0628		0.00100	0.000500
Barium, Total	7440-39-3	0.119		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0623		0.000600	0.000300
Chromium, Total	7440-47-3	0.0716		0.00200	0.00100
Copper, Total	7440-50-8	0.0638		0.00200	0.00100
Lead, Total	7439-92-1	0.0623		0.00100	0.000500
Manganese, Total	7439-96-5	0.0659		0.00200	0.00100
Nickel, Total	7440-02-0	0.0630		0.00400	0.00200

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Lab Report #: L13120753
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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Selenium, Total	7782-49-2	0.0742		0.00100	0.000500
Thallium, Total	7440-28-0	0.0623		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0661		0.00100	0.000500
Zinc, Total	7440-66-6	0.0695		0.0250	0.0125

Sample #: L13120753-05
Client ID: MW1-1
Matrix: Water
Workgroup #: WG456453
Collect Date: 12/04/2013 11:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: MES
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/13/2013 21:32
Run Date: 12/16/2013 14:10
File ID: 8M393366

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	15.3		10.0	2.50
Benzene	71-43-2	19.7		1.00	0.125
Bromobenzene	108-86-1	21.7		1.00	0.125
Bromochloromethane	74-97-5	23.6		1.00	0.200
Bromodichloromethane	75-27-4	19.9		1.00	0.250
Bromoform	75-25-2	21.0		1.00	0.500
Bromomethane	74-83-9	18.9		1.00	0.500
2-Butanone	78-93-3	11.2		10.0	2.50
n-Butylbenzene	104-51-8	19.8		1.00	0.250
sec-Butylbenzene	135-98-8	21.5		1.00	0.250
tert-Butylbenzene	98-06-6	21.4		1.00	0.250
Carbon disulfide	75-15-0	18.4		1.00	0.500
Carbon tetrachloride	56-23-5	21.6		1.00	0.250
Chlorobenzene	108-90-7	22.8		1.00	0.125
Chlorodibromomethane	124-48-1	22.1		1.00	0.250
Chloroethane	75-00-3	18.3		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.3		1.00	0.125
Chloromethane	74-87-3	17.8		1.00	0.500
2-Chlorotoluene	95-49-8	20.5		1.00	0.125
4-Chlorotoluene	106-43-4	19.9		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	15.1		5.00	1.00
1,2-Dibromoethane	106-93-4	19.9		1.00	0.250
Dibromomethane	74-95-3	20.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	21.5		1.00	0.125
1,3-Dichlorobenzene	541-73-1	22.3		1.00	0.250
1,4-Dichlorobenzene	106-46-7	21.0		1.00	0.125

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8	26.4		1.00	0.250
1,1-Dichloroethane	75-34-3	19.2		1.00	0.125
1,2-Dichloroethane	107-06-2	18.8		1.00	0.250
1,1-Dichloroethene	75-35-4	17.9		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	21.7		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	17.9		1.00	0.250
1,2-Dichloropropane	78-87-5	18.0		1.00	0.200
1,3-Dichloropropane	142-28-9	18.0		1.00	0.200
2,2-Dichloropropane	594-20-7	23.2		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.8		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	18.8		1.00	0.500
1,1-Dichloropropene	563-58-6	19.2		1.00	0.250
Ethylbenzene	100-41-4	20.9		1.00	0.250
2-Hexanone	591-78-6	13.4		10.0	2.50
Hexachlorobutadiene	87-68-3	20.4		1.00	0.250
Isopropylbenzene	98-82-8	22.7		1.00	0.250
p-Isopropyltoluene	99-87-6	21.7		1.00	0.250
4-Methyl-2-pentanone	108-10-1	13.6		10.0	2.50
Methylene chloride	75-09-2	18.9		5.00	0.250
Naphthalene	91-20-3	18.4		1.00	0.200
n-Propylbenzene	103-65-1	20.1		1.00	0.125
Styrene	100-42-5	22.0		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.5		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	16.7		1.00	0.200
Tetrachloroethene	127-18-4	24.0		1.00	0.250
Toluene	108-88-3	20.9		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	19.8		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	20.7		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.5		1.00	0.250
1,1,2-Trichloroethane	79-00-5	19.9		1.00	0.250
Trichloroethene	79-01-6	25.9		1.00	0.250
Trichlorofluoromethane	75-69-4	21.3		1.00	0.250
1,2,3-Trichloropropane	96-18-4	18.2		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.6		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	21.3		1.00	0.250
Vinyl acetate	108-05-4	18.2		10.0	2.50
Vinyl chloride	75-01-4	21.6		1.00	0.250
o-Xylene	95-47-6	22.4		1.00	0.250
m-,p-Xylene	179601-23-1	44.2		1.00	0.500

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	86.9	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	91.9	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-05 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW1-1 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:51
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/30/2013 10:10
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/30/2013 14:01
Collect Date: 12/04/2013 11:20 **Dilution:** 1 **File ID:** T2.123013.140135
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	12.6		0.500	0.250

Sample #: L13120753-05 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW1-1 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:51
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/20/2013 09:32
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/20/2013 19:36
Collect Date: 12/04/2013 11:20 **Dilution:** 1 **File ID:** T2.122013.193659
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.33		0.200	0.100
Calcium, Total	7440-70-2	18.1		0.500	0.250
Iron, Total	7439-89-6	2.60		0.100	0.0500
Potassium, Total	7440-09-7	34.0		1.00	0.500
Sodium, Total	7440-23-5	136		0.500	0.250
Strontium, Total	7440-24-6	1.05		0.0500	0.0250

Sample #: L13120753-05 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW1-1 **Prep Method:** 3015 **Prep Date:** 12/18/2013 08:28
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/18/2013 11:12
Workgroup #: WG456830 **Analyst:** JYH **Run Date:** 12/18/2013 13:08
Collect Date: 12/04/2013 11:20 **Dilution:** 1 **File ID:** NI.121813.130808
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0641		0.00100	0.000500

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.122		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0633		0.000600	0.000300
Chromium, Total	7440-47-3	0.0721		0.00200	0.00100
Copper, Total	7440-50-8	0.0652		0.00200	0.00100
Lead, Total	7439-92-1	0.0629		0.00100	0.000500
Manganese, Total	7439-96-5	0.0676		0.00200	0.00100
Nickel, Total	7440-02-0	0.0644		0.00400	0.00200
Selenium, Total	7782-49-2	0.0750		0.00100	0.000500
Thallium, Total	7440-28-0	0.0626		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0660		0.00100	0.000500
Zinc, Total	7440-66-6	0.0714		0.0250	0.0125

Sample #: L13120753-06
Client ID: TRIP BLANK 4DEC 2013
Matrix: Water
Workgroup #: WG456453
Collect Date: 12/04/2013 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: MES
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/13/2013 21:32
Run Date: 12/16/2013 15:54
File ID: 8M393369

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125

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Lab Report #: L13120753
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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250

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Lab Report #: L13120753
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	89.8	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	90.9	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-07
Client ID: MW1-2
Matrix: Water
Workgroup #: WG456453
Collect Date: 12/04/2013 14:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: MES
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/13/2013 21:32
Run Date: 12/16/2013 19:37
File ID: 8M393376

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	90.8	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	91.1	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-07
Client ID: MW1-2
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/04/2013 14:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:52
Cal Date: 12/20/2013 09:32
Run Date: 12/20/2013 19:40
File ID: T2.122013.194016

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.85		0.200	0.100
Calcium, Total	7440-70-2	11.2		0.500	0.250
Iron, Total	7439-89-6	1.29		0.100	0.0500
Potassium, Total	7440-09-7	2.58		1.00	0.500
Sodium, Total	7440-23-5	107		0.500	0.250
Strontium, Total	7440-24-6	0.708		0.0500	0.0250

Sample #: L13120753-07
Client ID: MW1-2
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/04/2013 14:30
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:52
Cal Date: 12/30/2013 10:10
Run Date: 12/30/2013 14:04
File ID: T2.123013.140453

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	4.10		0.500	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #: L13120753-07 | **PrePrep Method:** N/A | **Instrument:** ICP-MS2
Client ID: MW1-2 | **Prep Method:** 3015 | **Prep Date:** 12/19/2013 11:27
Matrix: Water | **Analytical Method:** 6020 | **Cal Date:** 12/19/2013 09:38
Workgroup #: WG457079 | **Analyst:** JYH | **Run Date:** 12/19/2013 15:30
Collect Date: 12/04/2013 14:30 | **Dilution:** 1 | **File ID:** NI.121913.153011
Sample Tag: 01 | **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0745		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000435	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00741		0.00200	0.00100
Copper, Total	7440-50-8	0.00990		0.00200	0.00100
Lead, Total	7439-92-1	0.00124		0.00100	0.000500
Manganese, Total	7439-96-5	0.0156		0.00200	0.00100
Nickel, Total	7440-02-0	0.00339	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00348		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00766		0.00100	0.000500
Zinc, Total	7440-66-6	0.0137	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-08 | **PrePrep Method:** N/A | **Instrument:** HPMS8
Client ID: FIELD BLANK 4DEC2013 | **Prep Method:** 5030B/5030C/5035A | **Prep Date:** N/A
Matrix: Water | **Analytical Method:** 8260B | **Cal Date:** 10/13/2013 21:32
Workgroup #: WG456453 | **Analyst:** MES | **Run Date:** 12/16/2013 16:26
Collect Date: 12/04/2013 14:20 | **Dilution:** 1 | **File ID:** 8M393370
Sample Tag: 01 | **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.152	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.8	86	118	
1,2-Dichloroethane-d4	87.0	80	120	
Toluene-d8	99.8	88	110	
4-Bromofluorobenzene	88.8	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-08
Client ID: FIELD BLANK 4DEC2013
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/04/2013 14:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:52
Cal Date: 12/20/2013 09:32
Run Date: 12/20/2013 19:43
File ID: T2.122013.194346

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-08 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: FIELD BLANK 4DEC2013 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:52
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/30/2013 10:10
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/30/2013 14:08
Collect Date: 12/04/2013 14:20 **Dilution:** 1 **File ID:** T2.123013.140826
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4		ND	0.500	0.250
ND	Not detected at or above the reporting limit (RL/MDL).				

Sample #: L13120753-08 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: FIELD BLANK 4DEC2013 **Prep Method:** 3015 **Prep Date:** 12/19/2013 11:27
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/19/2013 09:38
Workgroup #: WG457079 **Analyst:** JYH **Run Date:** 12/19/2013 15:33
Collect Date: 12/04/2013 14:20 **Dilution:** 1 **File ID:** NI.121913.153316
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125
ND	Not detected at or above the reporting limit (RL/MDL).				

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	35BWW10	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2013 00:17
Workgroup #:	WG456605	**Analyst:**	ADC/MES	**Run Date:**	12/17/2013 16:50
Collect Date:	12/04/2013 16:00	**Dilution:**	1	**File ID:**	6M122471
Sample Tag:	02	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.279	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	3.61		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	54.4		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.3	86	118	
1,2-Dichloroethane-d4	96.9	80	120	
Toluene-d8	97.0	88	110	
4-Bromofluorobenzene	93.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-09 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW10 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:51
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/30/2013 10:10
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/30/2013 14:12
Collect Date: 12/04/2013 16:00 **Dilution:** 1 **File ID:** T2.123013.141201
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	4.26		0.500	0.250

Sample #: L13120753-09 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW10 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:51
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/20/2013 09:32
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/20/2013 19:54
Collect Date: 12/04/2013 16:00 **Dilution:** 1 **File ID:** T2.122013.195414
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.37		0.200	0.100
Calcium, Total	7440-70-2	7.10		0.500	0.250
Iron, Total	7439-89-6	2.96		0.100	0.0500
Potassium, Total	7440-09-7	1.52		1.00	0.500
Sodium, Total	7440-23-5	87.7		0.500	0.250
Strontium, Total	7440-24-6	0.247		0.0500	0.0250

Sample #: L13120753-09 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW10 **Prep Method:** 3015 **Prep Date:** 12/19/2013 11:27
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/19/2013 09:38
Workgroup #: WG457079 **Analyst:** JYH **Run Date:** 12/19/2013 15:36
Collect Date: 12/04/2013 16:00 **Dilution:** 1 **File ID:** NI.121913.153621
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0849		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00361		0.00200	0.00100
Copper, Total	7440-50-8	0.00255		0.00200	0.00100
Lead, Total	7439-92-1	0.00259		0.00100	0.000500

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.103		0.00200	0.00100
Nickel, Total	7440-02-0	0.00467		0.00400	0.00200
Selenium, Total	7782-49-2	0.00803		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00857		0.00100	0.000500
Zinc, Total	7440-66-6	0.0567		0.0250	0.0125

ND Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-10
Client ID: MW2-1
Matrix: Water
Workgroup #: WG456605
Collect Date: 12/04/2013 17:00
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC/MES
Dilution: 1
Units: ug/L

Instrument: HPMS6
Prep Date: N/A
Cal Date: 11/06/2013 00:17
Run Date: 12/17/2013 17:21
File ID: 6M122472

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.49		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.82		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.4	86	118	
1,2-Dichloroethane-d4	97.7	80	120	
Toluene-d8	96.9	88	110	
4-Bromofluorobenzene	92.5	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-10 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW2-1 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:52
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/30/2013 10:10
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/30/2013 14:15
Collect Date: 12/04/2013 17:00 **Dilution:** 1 **File ID:** T2.123013.141532
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	2.43		0.500	0.250

Sample #: L13120753-10 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW2-1 **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:52
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/20/2013 09:32
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/20/2013 19:57
Collect Date: 12/04/2013 17:00 **Dilution:** 1 **File ID:** T2.122013.195743
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.17		0.200	0.100
Calcium, Total	7440-70-2	6.31		0.500	0.250
Iron, Total	7439-89-6	0.840		0.100	0.0500
Potassium, Total	7440-09-7	1.41		1.00	0.500
Sodium, Total	7440-23-5	33.4		0.500	0.250
Strontium, Total	7440-24-6	0.169		0.0500	0.0250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L13120753-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-1	**Prep Method:**	3015	**Prep Date:**	12/19/2013 11:27
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/19/2013 09:38
Workgroup #:	WG457079	**Analyst:**	JYH	**Run Date:**	12/19/2013 15:39
Collect Date:	12/04/2013 17:00	**Dilution:**	1	**File ID:**	NI.121913.153925
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0643		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000328	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00178	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.126		0.00200	0.00100
Nickel, Total	7440-02-0	0.00264	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00165		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00215		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13120753-11	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW2-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/13/2013 21:32
Workgroup #:	WG456453	**Analyst:**	MES	**Run Date:**	12/16/2013 21:12
Collect Date:	12/05/2013 09:20	**Dilution:**	1	**File ID:**	8M393379
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	92.2	80	120	
Toluene-d8	99.0	88	110	
4-Bromofluorobenzene	86.9	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-11
Client ID: MW2-2
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/05/2013 09:20
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:51
Cal Date: 12/30/2013 10:10
Run Date: 12/30/2013 14:19
File ID: T2.123013.141904

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	4.74		0.500	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L13120753-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW2-2	**Prep Method:**	3015	**Prep Date:**	12/20/2013 10:51
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	12/20/2013 09:32
Workgroup #:	WG457227	**Analyst:**	QX	**Run Date:**	12/20/2013 20:01
Collect Date:	12/05/2013 09:20	**Dilution:**	1	**File ID:**	T2.122013.200115
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	11.8		0.200	0.100
Calcium, Total	7440-70-2	6.57		0.500	0.250
Iron, Total	7439-89-6	29.1		0.100	0.0500
Potassium, Total	7440-09-7	2.16		1.00	0.500
Sodium, Total	7440-23-5	17.4		0.500	0.250
Strontium, Total	7440-24-6	0.242		0.0500	0.0250

Sample #:	L13120753-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-2	**Prep Method:**	3015	**Prep Date:**	12/19/2013 11:27
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/19/2013 09:38
Workgroup #:	WG457079	**Analyst:**	JYH	**Run Date:**	12/19/2013 15:42
Collect Date:	12/05/2013 09:20	**Dilution:**	1	**File ID:**	NI.121913.154230
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Cadmium, Total	7440-43-9	0.000495	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.0578		0.00200	0.00100
Copper, Total	7440-50-8	0.0321		0.00200	0.00100
Lead, Total	7439-92-1	0.0276		0.00100	0.000500
Manganese, Total	7439-96-5	0.215		0.00200	0.00100
Nickel, Total	7440-02-0	0.0638		0.00400	0.00200
Selenium, Total	7782-49-2	0.00316		0.00100	0.000500
Thallium, Total	7440-28-0	0.000570		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0984		0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Sample #:	L13120753-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-2	**Prep Method:**	3015	**Prep Date:**	12/19/2013 11:27
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/19/2013 09:38
Workgroup #:	WG457079	**Analyst:**	JYH	**Run Date:**	12/19/2013 15:52
Collect Date:	12/05/2013 09:20	**Dilution:**	5	**File ID:**	NI.121913.155202
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.489		0.0150	0.00750
Zinc, Total	7440-66-6	0.727		0.125	0.0625

Sample #:	L13120753-12	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW2-3	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/13/2013 21:32
Workgroup #:	WG456453	**Analyst:**	MES	**Run Date:**	12/16/2013 21:44
Collect Date:	12/05/2013 10:45	**Dilution:**	1	**File ID:**	8M393380
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	92.5	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	88.0	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-12
Client ID: MW2-3
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/05/2013 10:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:51
Cal Date: 12/20/2013 09:32
Run Date: 12/20/2013 20:04
File ID: T2.122013.200441

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	5.18		0.200	0.100
Calcium, Total	7440-70-2	2.53		0.500	0.250
Iron, Total	7439-89-6	5.44		0.100	0.0500
Potassium, Total	7440-09-7	1.90		1.00	0.500
Sodium, Total	7440-23-5	21.4		0.500	0.250
Strontium, Total	7440-24-6	0.431		0.0500	0.0250

Sample #: L13120753-12
Client ID: MW2-3
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/05/2013 10:45
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:51
Cal Date: 12/30/2013 10:10
Run Date: 12/30/2013 14:22
File ID: T2.123013.142230

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	1.03		0.500	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-3	**Prep Method:**	3015	**Prep Date:**	12/19/2013 11:27
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/19/2013 09:38
Workgroup #:	WG457079	**Analyst:**	JYH	**Run Date:**	12/19/2013 15:45
Collect Date:	12/05/2013 10:45	**Dilution:**	1	**File ID:**	NI.121913.154536
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0871		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000470	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00428		0.00200	0.00100
Copper, Total	7440-50-8	0.00230		0.00200	0.00100
Lead, Total	7439-92-1	0.00196		0.00100	0.000500
Manganese, Total	7439-96-5	0.0196		0.00200	0.00100
Nickel, Total	7440-02-0	0.00494		0.00400	0.00200
Selenium, Total	7782-49-2	0.00129		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00740		0.00100	0.000500
Zinc, Total	7440-66-6	0.140		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13120753-13	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW3-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2013 00:17
Workgroup #:	WG456605	**Analyst:**	ADC/MES	**Run Date:**	12/17/2013 17:51
Collect Date:	12/05/2013 13:00	**Dilution:**	1	**File ID:**	6M122473
Sample Tag:	02	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	14.2		10.0	2.50
Benzene	71-43-2	0.843	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Lab Report #: L13120753
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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	15.2		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.84		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.5	86	118	
1,2-Dichloroethane-d4	96.3	80	120	
Toluene-d8	97.6	88	110	
4-Bromofluorobenzene	90.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-13
Client ID: MW3-1
Matrix: Water
Workgroup #: WG457227
Collect Date: 12/05/2013 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 10:52
Cal Date: 12/20/2013 09:32
Run Date: 12/20/2013 20:08
File ID: T2.122013.200811

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.110	J	0.200	0.100
Calcium, Total	7440-70-2	36.0		0.500	0.250
Iron, Total	7439-89-6	0.0850	J	0.100	0.0500
Potassium, Total	7440-09-7	10.9		1.00	0.500
Sodium, Total	7440-23-5	87.7		0.500	0.250
Strontium, Total	7440-24-6	4.63		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW3-1	**Prep Method:**	3015	**Prep Date:**	12/20/2013 10:52
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	12/30/2013 10:10
Workgroup #:	WG457227	**Analyst:**	QX	**Run Date:**	12/30/2013 14:25
Collect Date:	12/05/2013 13:00	**Dilution:**	1	**File ID:**	T2.123013.142559
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	3.57		0.500	0.250

Sample #:	L13120753-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW3-1	**Prep Method:**	3015	**Prep Date:**	12/19/2013 11:27
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/19/2013 09:38
Workgroup #:	WG457079	**Analyst:**	JYH	**Run Date:**	12/19/2013 15:48
Collect Date:	12/05/2013 13:00	**Dilution:**	1	**File ID:**	NI.121913.154841
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.160		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00398		0.00200	0.00100
Copper, Total	7440-50-8	0.00117	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0144		0.00200	0.00100
Nickel, Total	7440-02-0	0.0116		0.00400	0.00200
Selenium, Total	7782-49-2	0.00124		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00725		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13120753-14	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	TRIP BLANK 5DEC 2013	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/13/2013 21:32
Workgroup #:	WG456453	**Analyst:**	MES	**Run Date:**	12/16/2013 16:58
Collect Date:	12/05/2013 00:01	**Dilution:**	1	**File ID:**	8M393371
Sample Tag:	01	**Units:**	ug/L		

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	93.5	80	120	
Toluene-d8	103	88	110	
4-Bromofluorobenzene	91.4	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-15	**PrePrep Method:**	N/A	**Instrument:**	HPMS6
Client ID:	MW3-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	11/06/2013 00:17
Workgroup #:	WG456605	**Analyst:**	ADC/MES	**Run Date:**	12/17/2013 21:24
Collect Date:	12/06/2013 09:15	**Dilution:**	1	**File ID:**	6M122480
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	40.1		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.42		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.8	86	118	
1,2-Dichloroethane-d4	97.5	80	120	
Toluene-d8	96.5	88	110	
4-Bromofluorobenzene	92.9	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW3-2	**Prep Method:**	3015	**Prep Date:**	12/20/2013 10:52
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	12/30/2013 10:10
Workgroup #:	WG457227	**Analyst:**	QX	**Run Date:**	12/30/2013 14:29
Collect Date:	12/06/2013 09:15	**Dilution:**	1	**File ID:**	T2.123013.142931
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	4.35		0.500	0.250

Sample #:	L13120753-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW3-2	**Prep Method:**	3015	**Prep Date:**	12/20/2013 10:52
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	12/20/2013 09:32
Workgroup #:	WG457227	**Analyst:**	QX	**Run Date:**	12/20/2013 20:11
Collect Date:	12/06/2013 09:15	**Dilution:**	1	**File ID:**	T2.122013.201143
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.196	J	0.200	0.100
Calcium, Total	7440-70-2	8.59		0.500	0.250
Iron, Total	7439-89-6	0.215		0.100	0.0500
Potassium, Total	7440-09-7	1.21		1.00	0.500
Sodium, Total	7440-23-5	26.8		0.500	0.250
Strontium, Total	7440-24-6	0.327		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #:	L13120753-15	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW3-2	**Prep Method:**	3015	**Prep Date:**	12/20/2013 09:05
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/20/2013 10:41
Workgroup #:	WG457194	**Analyst:**	JYH	**Run Date:**	12/20/2013 11:27
Collect Date:	12/06/2013 09:15	**Dilution:**	1	**File ID:**	NI.122013.112731
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.123		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000809		0.000600	0.000300
Chromium, Total	7440-47-3	0.00104	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0305		0.00200	0.00100

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Analyte	CAS #	Result	Qual	RL	MDL
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00277		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00133		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-16
Client ID: MW3-2D
Matrix: Water
Workgroup #: WG456797
Collect Date: 12/06/2013 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: MES
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/13/2013 21:32
Run Date: 12/18/2013 13:53
File ID: 8M393434

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	46.4		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.68		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	91.2	80	120	
Toluene-d8	99.6	88	110	
4-Bromofluorobenzene	86.9	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-16 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW3-2D **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:52
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/30/2013 10:10
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/30/2013 14:33
Collect Date: 12/06/2013 09:30 **Dilution:** 1 **File ID:** T2.123013.143302
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	4.15		0.500	0.250

Sample #: L13120753-16 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW3-2D **Prep Method:** 3015 **Prep Date:** 12/20/2013 10:52
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/20/2013 09:32
Workgroup #: WG457227 **Analyst:** QX **Run Date:** 12/20/2013 20:15
Collect Date: 12/06/2013 09:30 **Dilution:** 1 **File ID:** T2.122013.201514
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.163	J	0.200	0.100
Calcium, Total	7440-70-2	8.44		0.500	0.250
Iron, Total	7439-89-6	0.193		0.100	0.0500
Potassium, Total	7440-09-7	1.20		1.00	0.500
Sodium, Total	7440-23-5	26.5		0.500	0.250
Strontium, Total	7440-24-6	0.319		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L13120753-16	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW3-2D	**Prep Method:**	3015	**Prep Date:**	12/20/2013 09:05
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/20/2013 10:41
Workgroup #:	WG457194	**Analyst:**	JYH	**Run Date:**	12/20/2013 11:30
Collect Date:	12/06/2013 09:30	**Dilution:**	1	**File ID:**	NI.122013.113036
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.120		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000661		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0294		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00301		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00130		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13120753-17	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW3-3	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/13/2013 21:32
Workgroup #:	WG456797	**Analyst:**	MES	**Run Date:**	12/18/2013 14:25
Collect Date:	12/06/2013 11:00	**Dilution:**	1	**File ID:**	8M393435
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250

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Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.161	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.356	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	33.9		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.28		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	91.3	80	120	
Toluene-d8	97.6	88	110	
4-Bromofluorobenzene	87.8	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-17
Client ID: MW3-3
Matrix: Water
Workgroup #: WG457252
Collect Date: 12/06/2013 11:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 13:33
Cal Date: 12/24/2013 09:07
Run Date: 12/24/2013 21:07
File ID: T2.122413.210702

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.33		0.200	0.100
Calcium, Total	7440-70-2	5.33		0.500	0.250
Iron, Total	7439-89-6	1.67		0.100	0.0500
Magnesium, Total	7439-95-4	2.09		0.500	0.250
Potassium, Total	7440-09-7	1.30		1.00	0.500
Sodium, Total	7440-23-5	60.8		0.500	0.250
Strontium, Total	7440-24-6	0.119		0.0500	0.0250

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Lab Contact: Kathy Albertson

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Sample #:	L13120753-17	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW3-3	**Prep Method:**	3015	**Prep Date:**	12/20/2013 09:05
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/20/2013 10:41
Workgroup #:	WG457194	**Analyst:**	JYH	**Run Date:**	12/20/2013 11:58
Collect Date:	12/06/2013 11:00	**Dilution:**	1	**File ID:**	NI.122013.115824
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0995		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.0100		0.00200	0.00100
Copper, Total	7440-50-8	0.00198	J	0.00200	0.00100
Lead, Total	7439-92-1	0.00107		0.00100	0.000500
Manganese, Total	7439-96-5	0.0317		0.00200	0.00100
Nickel, Total	7440-02-0	0.00361	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00462		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00977		0.00100	0.000500
Zinc, Total	7440-66-6	0.0132	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13120753-18	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	TRIP BLANK 6DEC 2013	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/13/2013 21:32
Workgroup #:	WG456797	**Analyst:**	MES	**Run Date:**	12/18/2013 12:18
Collect Date:	12/06/2013 00:01	**Dilution:**	1	**File ID:**	8M393431
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.5	86	118	
1,2-Dichloroethane-d4	85.4	80	120	
Toluene-d8	99.8	88	110	
4-Bromofluorobenzene	90.9	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-19
Client ID: MW-58
Matrix: Water
Workgroup #: WG456797
Collect Date: 12/06/2013 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: MES
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/13/2013 21:32
Run Date: 12/18/2013 14:57
File ID: 8M393436

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50

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Analyte	CAS #	Result	Qual	RL	MDL
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200

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Analyte	CAS #	Result	Qual	RL	MDL
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	10.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.57		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	86	118	
1,2-Dichloroethane-d4	92.1	80	120	
Toluene-d8	98.9	88	110	
4-Bromofluorobenzene	88.3	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-19
Client ID: MW-58
Matrix: Water
Workgroup #: WG457252
Collect Date: 12/06/2013 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 13:33
Cal Date: 12/24/2013 09:07
Run Date: 12/24/2013 21:10
File ID: T2.122413.211033

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	24.1		0.500	0.250
Iron, Total	7439-89-6	0.127		0.100	0.0500
Magnesium, Total	7439-95-4	7.67		0.500	0.250
Potassium, Total	7440-09-7	2.18		1.00	0.500
Sodium, Total	7440-23-5	60.9		0.500	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Strontium, Total	7440-24-6	0.388		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-19 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW-58 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:01
Collect Date: 12/06/2013 13:00 **Dilution:** 1 **File ID:** NI.122013.120128
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.200		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00874		0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00631		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00220		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00107		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-20 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: 35B WW03 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 10/13/2013 21:32
Workgroup #: WG456797 **Analyst:** MES **Run Date:** 12/18/2013 15:29
Collect Date: 12/06/2013 14:30 **Dilution:** 1 **File ID:** 8M393437
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	91.2	80	120	
Toluene-d8	98.3	88	110	
4-Bromofluorobenzene	89.4	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-20
Client ID: 35B WW03
Matrix: Water
Workgroup #: WG457252
Collect Date: 12/06/2013 14:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 13:33
Cal Date: 12/24/2013 09:07
Run Date: 12/24/2013 21:14
File ID: T2.122413.211403

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	6.32		0.500	0.250
Iron, Total	7439-89-6	0.132		0.100	0.0500
Magnesium, Total	7439-95-4	2.98		0.500	0.250
Potassium, Total	7440-09-7	4.78		1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
Sodium, Total	7440-23-5	146		0.500	0.250
Strontium, Total	7440-24-6	0.743		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-20 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW03 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:04
Collect Date: 12/06/2013 14:30 **Dilution:** 1 **File ID:** NI.122013.120433
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0997		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00109	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00341		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00265		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-21 **PrePrep Method:** N/A **Instrument:** HPMS9
Client ID: 35B WW20 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 12/11/2013 20:55
Workgroup #: WG456874 **Analyst:** ADC **Run Date:** 12/18/2013 19:45
Collect Date: 12/09/2013 08:45 **Dilution:** 1 **File ID:** 9M960336
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.301	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	20.6		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	7.33		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.4	86	118	
1,2-Dichloroethane-d4	92.0	80	120	
Toluene-d8	95.2	88	110	
4-Bromofluorobenzene	87.5	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-21
Client ID: 35B WW20
Matrix: Water
Workgroup #: WG457252
Collect Date: 12/09/2013 08:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 13:33
Cal Date: 12/24/2013 09:07
Run Date: 12/24/2013 21:17
File ID: T2.122413.211735

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.09		0.200	0.100
Calcium, Total	7440-70-2	19.5		0.500	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Iron, Total	7439-89-6	2.88		0.100	0.0500
Magnesium, Total	7439-95-4	6.85		0.500	0.250
Potassium, Total	7440-09-7	99.8		1.00	0.500
Sodium, Total	7440-23-5	141		0.500	0.250
Strontium, Total	7440-24-6	0.529		0.0500	0.0250

Sample #: L13120753-21 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW20 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:07
Collect Date: 12/09/2013 08:45 **Dilution:** 1 **File ID:** NI.122013.120738
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Cadmium, Total	7440-43-9	0.000679		0.000600	0.000300
Chromium, Total	7440-47-3	0.0502		0.00200	0.00100
Copper, Total	7440-50-8	0.00242		0.00200	0.00100
Lead, Total	7439-92-1	0.00142		0.00100	0.000500
Manganese, Total	7439-96-5	0.0164		0.00200	0.00100
Nickel, Total	7440-02-0	0.00362	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0354		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00508		0.00100	0.000500
Zinc, Total	7440-66-6	0.0329		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-21 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW20 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:45
Collect Date: 12/09/2013 08:45 **Dilution:** 50 **File ID:** NI.122013.124530
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.272		0.150	0.0750

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Lab Contact: Kathy Albertson

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Sample #:	L13120753-22	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35B WW04	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 20:14
Collect Date:	12/09/2013 10:00	**Dilution:**	1	**File ID:**	9M960337
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2	0.131	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.140	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.884	J	1.00	0.125
1,2-Dichloroethane	107-06-2	0.334	J	1.00	0.250
1,1-Dichloroethene	75-35-4	2.31		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.726	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	57.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	9.39		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.9	86	118	
1,2-Dichloroethane-d4	96.6	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	96.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-22 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35B WW04 **Prep Method:** 3015 **Prep Date:** 12/20/2013 13:33
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/24/2013 09:07
Workgroup #: WG457252 **Analyst:** PDM **Run Date:** 12/24/2013 21:38
Collect Date: 12/09/2013 10:00 **Dilution:** 1 **File ID:** T2.122413.213818
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.83		0.200	0.100
Calcium, Total	7440-70-2	7.43		0.500	0.250
Iron, Total	7439-89-6	2.20		0.100	0.0500
Magnesium, Total	7439-95-4	3.48		0.500	0.250
Potassium, Total	7440-09-7	0.901	J	1.00	0.500
Sodium, Total	7440-23-5	58.4		0.500	0.250
Strontium, Total	7440-24-6	0.193		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13120753-22 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW04 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:10
Collect Date: 12/09/2013 10:00 **Dilution:** 1 **File ID:** NI.122013.121042
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0616		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000634		0.000600	0.000300
Chromium, Total	7440-47-3	0.00302		0.00200	0.00100
Copper, Total	7440-50-8	0.00154	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000958	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00745		0.00200	0.00100
Nickel, Total	7440-02-0	0.00269	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00145		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00514		0.00100	0.000500
Zinc, Total	7440-66-6	0.0153	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L13120753-23	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	FIELD BLANK 9DEC 2013	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 18:16
Collect Date:	12/09/2013 09:30	**Dilution:**	1	**File ID:**	9M960333
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	7.20	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.217	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	97.3	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	101	86	115	

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-23 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: FIELD BLANK 9DEC 2013 **Prep Method:** 3015 **Prep Date:** 12/20/2013 13:33
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/24/2013 09:07
Workgroup #: WG457252 **Analyst:** PDM **Run Date:** 12/24/2013 21:41
Collect Date: 12/09/2013 09:30 **Dilution:** 1 **File ID:** T2.122413.214147
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-23 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: FIELD BLANK 9DEC 2013 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:13
Collect Date: 12/09/2013 09:30 **Dilution:** 1 **File ID:** NI.122013.121347
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-24	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35B WW12	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 20:44
Collect Date:	12/09/2013 11:15	**Dilution:**	1	**File ID:**	9M960338
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	16.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.40		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.2	86	118	
1,2-Dichloroethane-d4	92.9	80	120	
Toluene-d8	95.0	88	110	
4-Bromofluorobenzene	94.0	86	115	

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-24 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35B WW12 **Prep Method:** 3015 **Prep Date:** 12/20/2013 13:33
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/24/2013 09:07
Workgroup #: WG457252 **Analyst:** PDM **Run Date:** 12/24/2013 21:45
Collect Date: 12/09/2013 11:15 **Dilution:** 1 **File ID:** T2.122413.214521
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.895		0.200	0.100
Calcium, Total	7440-70-2	17.8		0.500	0.250
Iron, Total	7439-89-6	2.92		0.100	0.0500
Magnesium, Total	7439-95-4	7.75		0.500	0.250
Potassium, Total	7440-09-7	0.837	J	1.00	0.500
Sodium, Total	7440-23-5	60.0		0.500	0.250
Strontium, Total	7440-24-6	0.427		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13120753-24 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW12 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:16
Collect Date: 12/09/2013 11:15 **Dilution:** 1 **File ID:** NI.122013.121652
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0881		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000339	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00234		0.00200	0.00100
Copper, Total	7440-50-8	0.00176	J	0.00200	0.00100
Lead, Total	7439-92-1	0.00142		0.00100	0.000500
Manganese, Total	7439-96-5	0.0436		0.00200	0.00100
Nickel, Total	7440-02-0	0.00361	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000660	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00401		0.00100	0.000500
Zinc, Total	7440-66-6	0.0294		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-25	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35B WW05	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 21:13
Collect Date:	12/09/2013 13:20	**Dilution:**	1	**File ID:**	9M960339
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.367	J	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.77		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	13.0		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.3	86	118	
1,2-Dichloroethane-d4	95.9	80	120	
Toluene-d8	99.1	88	110	
4-Bromofluorobenzene	95.6	86	115	

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-25 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35B WW05 **Prep Method:** 3015 **Prep Date:** 12/20/2013 13:33
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/24/2013 09:07
Workgroup #: WG457252 **Analyst:** PDM **Run Date:** 12/24/2013 21:48
Collect Date: 12/09/2013 13:20 **Dilution:** 1 **File ID:** T2.122413.214851
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.494		0.200	0.100
Calcium, Total	7440-70-2	14.6		0.500	0.250
Iron, Total	7439-89-6	2.34		0.100	0.0500
Magnesium, Total	7439-95-4	7.12		0.500	0.250
Potassium, Total	7440-09-7	0.921	J	1.00	0.500
Sodium, Total	7440-23-5	62.0		0.500	0.250
Strontium, Total	7440-24-6	0.448		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13120753-25 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW05 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:27
Collect Date: 12/09/2013 13:20 **Dilution:** 1 **File ID:** NI.122013.122701
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0588		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00168	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00109	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000635	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0769		0.00200	0.00100
Nickel, Total	7440-02-0	0.00229	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000739	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00288		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L13120753-26	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35B WW06	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 21:43
Collect Date:	12/09/2013 14:30	**Dilution:**	1	**File ID:**	9M960340
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.7	86	118	
1,2-Dichloroethane-d4	95.5	80	120	
Toluene-d8	98.2	88	110	

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4-Bromofluorobenzene	96.3	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-26 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35B WW06 **Prep Method:** 3015 **Prep Date:** 12/20/2013 13:33
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/24/2013 09:07
Workgroup #: WG457252 **Analyst:** PDM **Run Date:** 12/24/2013 21:52
Collect Date: 12/09/2013 14:30 **Dilution:** 1 **File ID:** T2.122413.215220
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	73.6		0.500	0.250
Iron, Total	7439-89-6	8.60		0.100	0.0500
Magnesium, Total	7439-95-4	19.3		0.500	0.250
Potassium, Total	7440-09-7	2.20		1.00	0.500
Sodium, Total	7440-23-5	147		0.500	0.250
Strontium, Total	7440-24-6	1.92		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-26 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW06 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:30
Collect Date: 12/09/2013 14:30 **Dilution:** 1 **File ID:** NI.122013.123006
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0725		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00130	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0	0.00347	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00518		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Sample #:	L13120753-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35B WW06	**Prep Method:**	3015	**Prep Date:**	12/20/2013 09:05
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/20/2013 10:41
Workgroup #:	WG457194	**Analyst:**	JYH	**Run Date:**	12/20/2013 12:54
Collect Date:	12/09/2013 14:30	**Dilution:**	50	**File ID:**	NI.122013.125436
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.223		0.100	0.0500

Sample #:	L13120753-27	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	MW 4-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 22:12
Collect Date:	12/10/2013 09:00	**Dilution:**	1	**File ID:**	9M960341
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.163	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.246	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.972	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.517	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	19.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.38		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	96.1	86	118	
1,2-Dichloroethane-d4	92.0	80	120	
Toluene-d8	97.0	88	110	
4-Bromofluorobenzene	95.9	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-27
Client ID: MW 4-1
Matrix: Water
Workgroup #: WG457252
Collect Date: 12/10/2013 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 13:33
Cal Date: 12/24/2013 09:07
Run Date: 12/24/2013 21:55
File ID: T2.122413.215549

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.142	J	0.200	0.100
Calcium, Total	7440-70-2	21.1		0.500	0.250
Iron, Total	7439-89-6	0.758		0.100	0.0500
Magnesium, Total	7439-95-4	8.67		0.500	0.250
Potassium, Total	7440-09-7	1.72		1.00	0.500
Sodium, Total	7440-23-5	104		0.500	0.250
Strontium, Total	7440-24-6	0.533		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L13120753-27
Client ID: MW 4-1
Matrix: Water
Workgroup #: WG457194
Collect Date: 12/10/2013 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 12/20/2013 09:05
Cal Date: 12/20/2013 10:41
Run Date: 12/20/2013 12:33
File ID: NI.122013.123311

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0528		0.00300	0.00150

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Analyte	CAS #	Result	Qual	RL	MDL
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00135	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0	0.00315	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000877	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6	0.0242	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-27 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-1 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:57
Collect Date: 12/10/2013 09:00 **Dilution:** 50 **File ID:** NI.122013.125740
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.438		0.100	0.0500

Sample #: L13120753-28 **PrePrep Method:** N/A **Instrument:** HPMS9
Client ID: MW 4-1D **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 12/11/2013 20:55
Workgroup #: WG456874 **Analyst:** ADC **Run Date:** 12/18/2013 22:41
Collect Date: 12/10/2013 09:15 **Dilution:** 1 **File ID:** 9M960342
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.132	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.226	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.865	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.571	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	19.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.34		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.7	86	118	
1,2-Dichloroethane-d4	97.1	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	100	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-28
Client ID: MW 4-1D
Matrix: Water
Workgroup #: WG457252
Collect Date: 12/10/2013 09:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 13:33
Cal Date: 12/24/2013 09:07
Run Date: 12/24/2013 21:59
File ID: T2.122413.215919

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	21.4		0.500	0.250
Iron, Total	7439-89-6	0.704		0.100	0.0500
Magnesium, Total	7439-95-4	8.73		0.500	0.250
Potassium, Total	7440-09-7	1.62		1.00	0.500
Sodium, Total	7440-23-5	106		0.500	0.250
Strontium, Total	7440-24-6	0.543		0.0500	0.0250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-28 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-1D **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:36
Collect Date: 12/10/2013 09:15 **Dilution:** 1 **File ID:** NI.122013.123616
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0535		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0	0.00235	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000853	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-28 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-1D **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 13:00
Collect Date: 12/10/2013 09:15 **Dilution:** 50 **File ID:** NI.122013.130045
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.435		0.100	0.0500

Sample #: L13120753-29 **PrePrep Method:** N/A **Instrument:** HPMS9
Client ID: TRIP BLANK 10DEC 2013 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 12/11/2013 20:55
Workgroup #: WG456874 **Analyst:** ADC **Run Date:** 12/18/2013 18:46
Collect Date: 12/10/2013 00:01 **Dilution:** 1 **File ID:** 9M960334
Sample Tag: 01 **Units:** ug/L

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.8	86	118	
1,2-Dichloroethane-d4	92.2	80	120	
Toluene-d8	97.6	88	110	
4-Bromofluorobenzene	96.2	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	MW 4-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 23:11
Collect Date:	12/10/2013 10:30	**Dilution:**	1	**File ID:**	9M960343
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.210	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.631	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	3.73		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.901	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	10.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	7.21		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.3	86	118	
1,2-Dichloroethane-d4	96.5	80	120	
Toluene-d8	99.5	88	110	
4-Bromofluorobenzene	98.0	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-30 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW 4-2 **Prep Method:** 3015 **Prep Date:** 12/20/2013 13:33
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/24/2013 09:07
Workgroup #: WG457252 **Analyst:** PDM **Run Date:** 12/24/2013 22:02
Collect Date: 12/10/2013 10:30 **Dilution:** 1 **File ID:** T2.122413.220249
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	9.85		0.500	0.250
Iron, Total	7439-89-6	0.137		0.100	0.0500
Magnesium, Total	7439-95-4	4.65		0.500	0.250
Potassium, Total	7440-09-7	1.09		1.00	0.500
Sodium, Total	7440-23-5	89.0		0.500	0.250
Strontium, Total	7440-24-6	0.251		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-30 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-2 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:39
Collect Date: 12/10/2013 10:30 **Dilution:** 1 **File ID:** NI.122013.123920
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0450		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00148	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.160		0.00200	0.00100
Nickel, Total	7440-02-0	0.00287	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00141		0.00100	0.000500
Thallium, Total	7440-28-0	0.000109	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000642	J	0.00100	0.000500
Zinc, Total	7440-66-6	0.0310		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-31	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35B WW14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 19:15
Collect Date:	12/10/2013 12:40	**Dilution:**	1	**File ID:**	9M960335
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2	0.207	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.239	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.168	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	4.84		1.00	0.125
1,2-Dichloroethane	107-06-2	0.325	J	1.00	0.250
1,1-Dichloroethene	75-35-4	49.8		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	13.2		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5	0.481	J	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	23.9		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	72.6		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4	3.90		1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.5	86	118	
1,2-Dichloroethane-d4	95.9	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	98.9	86	115	

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J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-31 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35B WW14 **Prep Method:** 3015 **Prep Date:** 12/20/2013 13:33
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/24/2013 09:07
Workgroup #: WG457252 **Analyst:** PDM **Run Date:** 12/24/2013 22:06
Collect Date: 12/10/2013 12:40 **Dilution:** 1 **File ID:** T2.122413.220620
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	13.5		0.500	0.250
Iron, Total	7439-89-6	0.0841	J	0.100	0.0500
Magnesium, Total	7439-95-4	6.05		0.500	0.250
Potassium, Total	7440-09-7	0.817	J	1.00	0.500
Sodium, Total	7440-23-5	77.7		0.500	0.250
Strontium, Total	7440-24-6	0.385		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-31 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW14 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 11:15
Collect Date: 12/10/2013 12:40 **Dilution:** 1 **File ID:** NI.122013.111529
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0467		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0262		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00128		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

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Lab Contact: Kathy Albertson

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ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-32
Client ID: 35B WW14 MS
Matrix: Water
Workgroup #: WG456874
Collect Date: 12/10/2013 12:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS9
Prep Date: N/A
Cal Date: 12/11/2013 20:55
Run Date: 12/18/2013 16:18
File ID: 9M960329

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	23.8		10.0	2.50
Benzene	71-43-2	21.8		1.00	0.125
Bromobenzene	108-86-1	23.5		1.00	0.125
Bromochloromethane	74-97-5	22.8		1.00	0.200
Bromodichloromethane	75-27-4	21.9		1.00	0.250
Bromoform	75-25-2	23.0		1.00	0.500
Bromomethane	74-83-9	20.4		1.00	0.500
2-Butanone	78-93-3	20.6		10.0	2.50
n-Butylbenzene	104-51-8	26.0		1.00	0.250
sec-Butylbenzene	135-98-8	25.6		1.00	0.250
tert-Butylbenzene	98-06-6	24.2		1.00	0.250
Carbon disulfide	75-15-0	17.8		1.00	0.500
Carbon tetrachloride	56-23-5	21.9		1.00	0.250
Chlorobenzene	108-90-7	23.8		1.00	0.125
Chlorodibromomethane	124-48-1	23.2		1.00	0.250
Chloroethane	75-00-3	21.7		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	22.8		1.00	0.125
Chloromethane	74-87-3	24.2		1.00	0.500
2-Chlorotoluene	95-49-8	23.1		1.00	0.125
4-Chlorotoluene	106-43-4	26.8		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	26.7		5.00	1.00
1,2-Dibromoethane	106-93-4	22.7		1.00	0.250
Dibromomethane	74-95-3	23.5		1.00	0.250
1,2-Dichlorobenzene	95-50-1	24.8		1.00	0.125
1,3-Dichlorobenzene	541-73-1	24.6		1.00	0.250
1,4-Dichlorobenzene	106-46-7	23.4		1.00	0.125
Dichlorodifluoromethane	75-71-8	31.8		1.00	0.250
1,1-Dichloroethane	75-34-3	26.8		1.00	0.125
1,2-Dichloroethane	107-06-2	22.9		1.00	0.250
1,1-Dichloroethene	75-35-4	66.2		1.00	0.500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2	34.2		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	21.9		1.00	0.250
1,2-Dichloropropane	78-87-5	21.9		1.00	0.200
1,3-Dichloropropane	142-28-9	22.6		1.00	0.200
2,2-Dichloropropane	594-20-7	23.6		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	22.7		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	22.1		1.00	0.500
1,1-Dichloropropene	563-58-6	21.8		1.00	0.250
Ethylbenzene	100-41-4	22.5		1.00	0.250
2-Hexanone	591-78-6	21.1		10.0	2.50
Hexachlorobutadiene	87-68-3	24.0		1.00	0.250
Isopropylbenzene	98-82-8	23.8		1.00	0.250
p-Isopropyltoluene	99-87-6	24.8		1.00	0.250
4-Methyl-2-pentanone	108-10-1	20.2		10.0	2.50
Methylene chloride	75-09-2	21.4		5.00	0.250
Naphthalene	91-20-3	26.0		1.00	0.200
n-Propylbenzene	103-65-1	25.1		1.00	0.125
Styrene	100-42-5	23.2		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.2		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	28.1		1.00	0.200
Tetrachloroethene	127-18-4	44.9		1.00	0.250
Toluene	108-88-3	22.8		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	25.0		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	25.6		1.00	0.200
1,1,1-Trichloroethane	71-55-6	22.2		1.00	0.250
1,1,2-Trichloroethane	79-00-5	22.2		1.00	0.250
Trichloroethene	79-01-6	88.5		1.00	0.250
Trichlorofluoromethane	75-69-4	23.9		1.00	0.250
1,2,3-Trichloropropane	96-18-4	23.9		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	24.7		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	24.6		1.00	0.250
Vinyl acetate	108-05-4	28.7		10.0	2.50
Vinyl chloride	75-01-4	20.8		1.00	0.250
o-Xylene	95-47-6	23.3		1.00	0.250
m-,p-Xylene	179601-23-1	46.8		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.5	86	118	
1,2-Dichloroethane-d4	94.3	80	120	
Toluene-d8	100	88	110	

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Lab Contact: Kathy Albertson

Certificate of Analysis

4-Bromofluorobenzene	98.2	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-32
Client ID: 35B WW14 MS
Matrix: Water
Workgroup #: WG457252
Collect Date: 12/10/2013 12:50
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 12/20/2013 13:31
Cal Date: 12/24/2013 09:07
Run Date: 12/24/2013 22:09
File ID: T2.122413.220951

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	5.93		0.200	0.100
Calcium, Total	7440-70-2	19.6		0.500	0.250
Iron, Total	7439-89-6	2.37		0.100	0.0500
Magnesium, Total	7439-95-4	11.4		0.500	0.250
Potassium, Total	7440-09-7	29.4		1.00	0.500
Sodium, Total	7440-23-5	102		0.500	0.250
Strontium, Total	7440-24-6	0.939		0.0500	0.0250

Sample #: L13120753-32
Client ID: 35B WW14 MS
Matrix: Water
Workgroup #: WG457194
Collect Date: 12/10/2013 12:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 12/20/2013 09:05
Cal Date: 12/20/2013 10:41
Run Date: 12/20/2013 11:18
File ID: NI.122013.111834

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0657		0.00100	0.000500
Barium, Total	7440-39-3	0.107		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0632		0.000600	0.000300
Chromium, Total	7440-47-3	0.0608		0.00200	0.00100
Copper, Total	7440-50-8	0.0632		0.00200	0.00100
Lead, Total	7439-92-1	0.0637		0.00100	0.000500
Manganese, Total	7439-96-5	0.0862		0.00200	0.00100
Nickel, Total	7440-02-0	0.0635		0.00400	0.00200
Selenium, Total	7782-49-2	0.0626		0.00100	0.000500
Thallium, Total	7440-28-0	0.0637		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0619		0.00100	0.000500
Zinc, Total	7440-66-6	0.0673		0.0250	0.0125

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-33	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35B WW14 MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 16:48
Collect Date:	12/10/2013 13:00	**Dilution:**	1	**File ID:**	9M960330
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	24.6		10.0	2.50
Benzene	71-43-2	21.1		1.00	0.125
Bromobenzene	108-86-1	21.8		1.00	0.125
Bromochloromethane	74-97-5	21.7		1.00	0.200
Bromodichloromethane	75-27-4	21.0		1.00	0.250
Bromoform	75-25-2	21.7		1.00	0.500
Bromomethane	74-83-9	20.3		1.00	0.500
2-Butanone	78-93-3	22.5		10.0	2.50
n-Butylbenzene	104-51-8	24.5		1.00	0.250
sec-Butylbenzene	135-98-8	23.9		1.00	0.250
tert-Butylbenzene	98-06-6	23.1		1.00	0.250
Carbon disulfide	75-15-0	18.8		1.00	0.500
Carbon tetrachloride	56-23-5	20.9		1.00	0.250
Chlorobenzene	108-90-7	22.6		1.00	0.125
Chlorodibromomethane	124-48-1	21.9		1.00	0.250
Chloroethane	75-00-3	20.3		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	21.7		1.00	0.125
Chloromethane	74-87-3	23.3		1.00	0.500
2-Chlorotoluene	95-49-8	22.6		1.00	0.125
4-Chlorotoluene	106-43-4	24.1		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	25.4		5.00	1.00
1,2-Dibromoethane	106-93-4	21.4		1.00	0.250
Dibromomethane	74-95-3	22.5		1.00	0.250
1,2-Dichlorobenzene	95-50-1	23.5		1.00	0.125
1,3-Dichlorobenzene	541-73-1	22.9		1.00	0.250
1,4-Dichlorobenzene	106-46-7	22.0		1.00	0.125
Dichlorodifluoromethane	75-71-8	30.0		1.00	0.250
1,1-Dichloroethane	75-34-3	25.8		1.00	0.125
1,2-Dichloroethane	107-06-2	22.1		1.00	0.250
1,1-Dichloroethene	75-35-4	63.5		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	32.9		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	20.9		1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	21.0		1.00	0.200
1,3-Dichloropropane	142-28-9	21.4		1.00	0.200
2,2-Dichloropropane	594-20-7	21.8		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	22.2		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	21.0		1.00	0.500
1,1-Dichloropropene	563-58-6	20.7		1.00	0.250
Ethylbenzene	100-41-4	21.8		1.00	0.250
2-Hexanone	591-78-6	22.3		10.0	2.50
Hexachlorobutadiene	87-68-3	22.5		1.00	0.250
Isopropylbenzene	98-82-8	22.4		1.00	0.250
p-Isopropyltoluene	99-87-6	23.4		1.00	0.250
4-Methyl-2-pentanone	108-10-1	21.6		10.0	2.50
Methylene chloride	75-09-2	20.5		5.00	0.250
Naphthalene	91-20-3	24.8		1.00	0.200
n-Propylbenzene	103-65-1	23.5		1.00	0.125
Styrene	100-42-5	21.9		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.6		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	26.6		1.00	0.200
Tetrachloroethene	127-18-4	42.1		1.00	0.250
Toluene	108-88-3	21.5		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	24.1		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	24.0		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.0		1.00	0.250
1,1,2-Trichloroethane	79-00-5	21.6		1.00	0.250
Trichloroethene	79-01-6	84.2		1.00	0.250
Trichlorofluoromethane	75-69-4	22.5		1.00	0.250
1,2,3-Trichloropropane	96-18-4	22.7		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	23.1		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	22.9		1.00	0.250
Vinyl acetate	108-05-4	27.6		10.0	2.50
Vinyl chloride	75-01-4	21.0		1.00	0.250
o-Xylene	95-47-6	22.2		1.00	0.250
m-,p-Xylene	179601-23-1	44.1		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	95.4	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	97.5	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	35B WW14 MSD	**Prep Method:**	3015	**Prep Date:**	12/20/2013 13:31
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	12/24/2013 09:07
Workgroup #:	WG457252	**Analyst:**	PDM	**Run Date:**	12/24/2013 22:20
Collect Date:	12/10/2013 13:00	**Dilution:**	1	**File ID:**	T2.122413.222008
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	5.90		0.200	0.100
Calcium, Total	7440-70-2	20.5		0.500	0.250
Iron, Total	7439-89-6	2.37		0.100	0.0500
Magnesium, Total	7439-95-4	12.0		0.500	0.250
Potassium, Total	7440-09-7	29.3		1.00	0.500
Sodium, Total	7440-23-5	109		0.500	0.250
Strontium, Total	7440-24-6	0.975		0.0500	0.0250

Sample #:	L13120753-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35B WW14 MSD	**Prep Method:**	3015	**Prep Date:**	12/20/2013 09:05
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	12/20/2013 10:41
Workgroup #:	WG457194	**Analyst:**	JYH	**Run Date:**	12/20/2013 11:24
Collect Date:	12/10/2013 13:00	**Dilution:**	1	**File ID:**	NI.122013.112426
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0680		0.00100	0.000500
Barium, Total	7440-39-3	0.112		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0651		0.000600	0.000300
Chromium, Total	7440-47-3	0.0634		0.00200	0.00100
Copper, Total	7440-50-8	0.0664		0.00200	0.00100
Lead, Total	7439-92-1	0.0665		0.00100	0.000500
Manganese, Total	7439-96-5	0.0924		0.00200	0.00100
Nickel, Total	7440-02-0	0.0661		0.00400	0.00200
Selenium, Total	7782-49-2	0.0657		0.00100	0.000500
Thallium, Total	7440-28-0	0.0667		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0649		0.00100	0.000500
Zinc, Total	7440-66-6	0.0707		0.0250	0.0125

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L13120753-34	**PrePrep Method:**	N/A	**Instrument:**	HPMS9
Client ID:	35B WW17	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	12/11/2013 20:55
Workgroup #:	WG456874	**Analyst:**	ADC	**Run Date:**	12/18/2013 23:40
Collect Date:	12/10/2013 14:00	**Dilution:**	1	**File ID:**	9M960344
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.333	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.13		1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	15.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.53		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.7	86	118	
1,2-Dichloroethane-d4	92.9	80	120	
Toluene-d8	96.4	88	110	
4-Bromofluorobenzene	95.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L13120753
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L13120753-34 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35B WW17 **Prep Method:** 3015 **Prep Date:** 12/20/2013 13:33
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 12/24/2013 09:07
Workgroup #: WG457252 **Analyst:** PDM **Run Date:** 12/24/2013 22:23
Collect Date: 12/10/2013 14:00 **Dilution:** 1 **File ID:** T2.122413.222326
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.47		0.200	0.100
Calcium, Total	7440-70-2	16.2		0.500	0.250
Iron, Total	7439-89-6	4.03		0.100	0.0500
Magnesium, Total	7439-95-4	8.47		0.500	0.250
Potassium, Total	7440-09-7	1.43		1.00	0.500
Sodium, Total	7440-23-5	46.4		0.500	0.250
Strontium, Total	7440-24-6	0.453		0.0500	0.0250

Sample #: L13120753-34 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW17 **Prep Method:** 3015 **Prep Date:** 12/20/2013 09:05
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 12/20/2013 10:41
Workgroup #: WG457194 **Analyst:** JYH **Run Date:** 12/20/2013 12:42
Collect Date: 12/10/2013 14:00 **Dilution:** 1 **File ID:** NI.122013.124225
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.205		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000650		0.000600	0.000300
Chromium, Total	7440-47-3	0.00415		0.00200	0.00100
Copper, Total	7440-50-8	0.00355		0.00200	0.00100
Lead, Total	7439-92-1	0.00216		0.00100	0.000500
Manganese, Total	7439-96-5	0.114		0.00200	0.00100
Nickel, Total	7440-02-0	0.00728		0.00400	0.00200
Selenium, Total	7782-49-2	0.00103		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00444		0.00100	0.000500
Zinc, Total	7440-66-6	0.113		0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

METHOD BLANK SUMMARY

Login Number: L13120753
Work Group: WG456605
Blank File ID: 6M122462
Blank Sample ID: WG456605-01
Prep Date: 12/17/13 12:09
Instrument ID: HPMS6
Analyzed Date: 12/17/13 12:09
Method: 8260B
Analyst: ADC/MES

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG456605-02	6M122463	12/17/13 12:39	01
LCS2	WG456605-03	6M122464	12/17/13 13:10	01
35BWW10	L13120753-09	6M122471	12/17/13 16:50	02
MW2-1	L13120753-10	6M122472	12/17/13 17:21	02
MW3-1	L13120753-13	6M122473	12/17/13 17:51	02
MW3-2	L13120753-15	6M122480	12/17/13 21:24	01

Report Name: BLANK_SUMMARY
PDF File ID: 3280521
Report generated 12/23/2013 09:31

METHOD BLANK SUMMARY

Login Number: L13120753
Blank File ID: 8M393363
Prep Date: 12/16/13 12:34
Analyzed Date: 12/16/13 12:34
Analyst: MES

Work Group: WG456453
Blank Sample ID: WG456453-01
Instrument ID: HPMS8
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG456453-02	8M393364	12/16/13 13:06	01
MW1-1	L13120753-04	8M393365	12/16/13 13:39	01
MW1-1	L13120753-05	8M393366	12/16/13 14:10	01
TRIP BLANK 4DEC 2013	L13120753-06	8M393369	12/16/13 15:54	01
FIELD BLANK 4DEC2013	L13120753-08	8M393370	12/16/13 16:26	01
TRIP BLANK 5DEC 2013	L13120753-14	8M393371	12/16/13 16:58	01
MW1-1	L13120753-03	8M393372	12/16/13 17:30	01
35B WW09	L13120753-01	8M393374	12/16/13 18:33	01
35B WW08	L13120753-02	8M393375	12/16/13 19:05	01
MW1-2	L13120753-07	8M393376	12/16/13 19:37	01
MW2-2	L13120753-11	8M393379	12/16/13 21:12	01
MW2-3	L13120753-12	8M393380	12/16/13 21:44	01

Report Name: BLANK_SUMMARY
PDF File ID: 3280521
Report generated 12/23/2013 09:31

METHOD BLANK SUMMARY

Login Number: L13120753
Work Group: WG456797
Blank File ID: 8M393428
Blank Sample ID: WG456797-01
Prep Date: 12/18/13 10:42
Instrument ID: HPMS8
Analyzed Date: 12/18/13 10:42
Method: 8260B
Analyst: MES

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG456797-02	8M393429	12/18/13 11:14	01
TRIP BLANK 6DEC 2013	L13120753-18	8M393431	12/18/13 12:18	01
MW3-2D	L13120753-16	8M393434	12/18/13 13:53	01
MW3-3	L13120753-17	8M393435	12/18/13 14:25	01
MW-58	L13120753-19	8M393436	12/18/13 14:57	01
35B WW03	L13120753-20	8M393437	12/18/13 15:29	01

Report Name: BLANK_SUMMARY
PDF File ID: 3280521
Report generated 12/23/2013 09:31

METHOD BLANK SUMMARY

Login Number: L13120753
Blank File ID: 9M960327
Prep Date: 12/18/13 15:19
Analyzed Date: 12/18/13 15:19
Analyst: ADC

Work Group: WG456874
Blank Sample ID: WG456874-01
Instrument ID: HPMS9
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG456874-02	9M960328	12/18/13 15:49	01
35B WW14 MS	L13120753-32	9M960329	12/18/13 16:18	01
35B WW14 MSD	L13120753-33	9M960330	12/18/13 16:48	01
FIELD BLANK 9DEC 2013	L13120753-23	9M960333	12/18/13 18:16	01
TRIP BLANK 10DEC 2013	L13120753-29	9M960334	12/18/13 18:46	01
35B WW14	L13120753-31	9M960335	12/18/13 19:15	01
35B WW20	L13120753-21	9M960336	12/18/13 19:45	01
35B WW04	L13120753-22	9M960337	12/18/13 20:14	01
35B WW12	L13120753-24	9M960338	12/18/13 20:44	01
35B WW05	L13120753-25	9M960339	12/18/13 21:13	01
35B WW06	L13120753-26	9M960340	12/18/13 21:43	01
MW 4-1	L13120753-27	9M960341	12/18/13 22:12	01
MW 4-1D	L13120753-28	9M960342	12/18/13 22:41	01
MW 4-2	L13120753-30	9M960343	12/18/13 23:11	01
35B WW17	L13120753-34	9M960344	12/18/13 23:40	01

Report Name: BLANK_SUMMARY
PDF File ID: 3280521
Report generated 12/23/2013 09:31

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13120753 Prep Date:12/17/13 12:09 Sample ID:WG456605-01
Instrument ID:HPMS6 Run Date:12/17/13 12:09 Prep Method:5030B/5030C/503
File ID:6M122462 Analyst:ADC/MES Method:8260B
Workgroup (AAB#):WG456605 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS6-06-NOV-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3280522
23-DEC-2013 09:31

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13120753 Prep Date: 12/17/13 12:09 Sample ID: WG456605-01
Instrument ID: HPMS6 Run Date: 12/17/13 12:09 Prep Method: 5030B/5030C/503
File ID: 6M122462 Analyst: ADC/MES Method: 8260B
Workgroup (AAB#): WG456605 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-06-NOV-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	96.8	86 - 118	PASS
1,2-Dichloroethane-d4	94.1	80 - 120	PASS
Toluene-d8	97.4	88 - 110	PASS
4-Bromofluorobenzene	93.1	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3280522
23-DEC-2013 09:31

Login Number: L13120753 Prep Date: 12/16/13 12:34 Sample ID: WG456453-01
Instrument ID: HPMS8 Run Date: 12/16/13 12:34 Prep Method: 5030B/5030C/503
File ID: 8M393363 Analyst: MES Method: 8260B
Workgroup (AAB#): WG456453 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-13-OCT-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3280522
23-DEC-2013 09:31

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L13120753 Prep Date: 12/16/13 12:34 Sample ID: WG456453-01
Instrument ID: HPMS8 Run Date: 12/16/13 12:34 Prep Method: 5030B/5030C/503
File ID: 8M393363 Analyst: MES Method: 8260B
Workgroup (AAB#): WG456453 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-13-OCT-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	102	86 - 118	PASS
1,2-Dichloroethane-d4	90.5	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	94.6	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3280522
23-DEC-2013 09:31

Login Number:L13120753 Prep Date:12/18/13 10:42 Sample ID:WG456797-01
Instrument ID:HPMS8 Run Date:12/18/13 10:42 Prep Method:5030B/5030C/503
File ID:8M393428 Analyst:MES Method:8260B
Workgroup (AAB#):WG456797 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-13-OCT-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3280522
23-DEC-2013 09:31

Login Number:L13120753 Prep Date:12/18/13 10:42 Sample ID:WG456797-01
Instrument ID:HPMS8 Run Date:12/18/13 10:42 Prep Method:5030B/5030C/503
File ID:8M393428 Analyst:MES Method:8260B
Workgroup (AAB#):WG456797 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-13-OCT-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	97.6	86 - 118	PASS
1,2-Dichloroethane-d4	84.6	80 - 120	PASS
Toluene-d8	99.5	88 - 110	PASS
4-Bromofluorobenzene	89.7	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3280522
23-DEC-2013 09:31

Login Number:L13120753 Prep Date:12/18/13 15:19 Sample ID:WG456874-01
Instrument ID:HPMS9 Run Date:12/18/13 15:19 Prep Method:5030B/5030C/503
File ID:9M960327 Analyst:ADC Method:8260B
Workgroup (AAB#):WG456874 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS9-11-DEC-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3280522
23-DEC-2013 09:31

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13120753 Prep Date: 12/18/13 15:19 Sample ID: WG456874-01
Instrument ID: HPMS9 Run Date: 12/18/13 15:19 Prep Method: 5030B/5030C/503
File ID: 9M960327 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG456874 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS9-11-DEC-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	97.2	86 - 118	PASS
1,2-Dichloroethane-d4	95.4	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	103	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3280522
23-DEC-2013 09:31

Login Number: L13120753 Run Date: 12/16/2013 Sample ID: WG456453-02
Instrument ID: HPMS8 Run Time: 13:06 Prep Method: 5030B/5030C/503
File ID: 8M393364 Analyst: MES Method: 8260B
Workgroup (AAB#): WG456453 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD61695 Cal ID: HPMS8-13-OCT-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	19.2	95.9	40 - 180	
Benzene	20.0	20.3	101	80 - 121	
Bromobenzene	20.0	22.0	110	80 - 120	
Bromochloromethane	20.0	23.8	119	65 - 130	
Bromodichloromethane	20.0	20.8	104	80 - 131	
Bromoform	20.0	21.2	106	70 - 130	
Bromomethane	20.0	19.2	96.2	30 - 145	
2-Butanone	20.0	13.7	68.7	10 - 170	
n-Butylbenzene	20.0	20.7	103	80 - 131	
sec-Butylbenzene	20.0	22.4	112	80 - 127	
tert-Butylbenzene	20.0	23.1	115	80 - 126	
Carbon disulfide	20.0	19.9	99.6	58 - 128	
Carbon tetrachloride	20.0	23.5	117	65 - 140	
Chlorobenzene	20.0	22.8	114	80 - 120	
Chlorodibromomethane	20.0	22.0	110	60 - 135	
Chloroethane	20.0	19.3	96.5	60 - 135	
2-Chloroethyl vinyl ether	20.0	13.8	69.0	45 - 160	
Chloroform	20.0	20.9	105	80 - 125	
Chloromethane	20.0	18.0	89.8	40 - 125	
2-Chlorotoluene	20.0	22.6	113	80 - 127	
4-Chlorotoluene	20.0	19.7	98.3	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	15.2	75.8	50 - 130	
1,2-Dibromoethane	20.0	19.7	98.3	80 - 129	
Dibromomethane	20.0	21.0	105	75 - 125	
1,2-Dichlorobenzene	20.0	22.2	111	80 - 125	
1,3-Dichlorobenzene	20.0	23.0	115	80 - 120	
1,4-Dichlorobenzene	20.0	21.5	107	80 - 120	
Dichlorodifluoromethane	20.0	27.2	136	40 - 160	
1,1-Dichloroethane	20.0	19.8	99.2	80 - 125	
1,2-Dichloroethane	20.0	18.9	94.4	80 - 129	
1,1-Dichloroethene	20.0	18.4	92.1	80 - 132	
cis-1,2-Dichloroethene	20.0	21.7	109	70 - 125	
trans-1,2-Dichloroethene	20.0	18.8	93.8	80 - 127	
1,2-Dichloropropane	20.0	18.5	92.5	80 - 120	
1,3-Dichloropropane	20.0	18.6	93.0	80 - 120	
2,2-Dichloropropane	20.0	24.5	122	80 - 133	
cis-1,3-Dichloropropene	20.0	21.1	106	70 - 130	
trans-1,3-Dichloropropene	20.0	18.8	94.2	80 - 130	
1,1-Dichloropropene	20.0	20.4	102	75 - 130	
Ethylbenzene	20.0	21.3	106	80 - 122	
2-Hexanone	20.0	13.1	65.3	55 - 130	

LCS - Modified 03/06/2008
PDF File ID: 3269154
Report generated: 12/23/2013 09:31

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/16/2013 Sample ID: WG456453-02
Instrument ID: HPMS8 Run Time: 13:06 Prep Method: 5030B/5030C/503
File ID: 8M393364 Analyst: MES Method: 8260B
Workgroup (AAB#): WG456453 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD61695 Cal ID: HPMS8-13-OCT-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	22.3	112	72 - 132	
Isopropylbenzene	20.0	23.7	118	80 - 122	
p-Isopropyltoluene	20.0	22.9	114	80 - 122	
4-Methyl-2-pentanone	20.0	14.9	74.3	64 - 140	
Methylene chloride	20.0	20.0	99.9	80 - 123	
Naphthalene	20.0	18.4	92.1	59 - 149	
n-Propylbenzene	20.0	21.2	106	80 - 129	
Styrene	20.0	22.6	113	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	22.3	111	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	16.4	82.0	79 - 125	
Tetrachloroethene	20.0	25.1	126	80 - 124	*
Toluene	20.0	21.2	106	80 - 124	
1,2,3-Trichlorobenzene	20.0	20.0	99.8	55 - 140	
1,2,4-Trichlorobenzene	20.0	21.3	107	65 - 135	
1,1,1-Trichloroethane	20.0	23.3	116	80 - 134	
1,1,2-Trichloroethane	20.0	20.6	103	80 - 125	
Trichloroethene	20.0	22.4	112	80 - 122	
Trichlorofluoromethane	20.0	22.8	114	62 - 151	
1,2,3-Trichloropropane	20.0	17.5	87.4	75 - 125	
1,2,4-Trimethylbenzene	20.0	21.6	108	80 - 125	
1,3,5-Trimethylbenzene	20.0	22.3	111	80 - 127	
Vinyl acetate	20.0	18.8	94.2	10 - 190	
Vinyl chloride	20.0	22.2	111	50 - 170	
o-Xylene	20.0	22.5	113	80 - 122	
m-,p-Xylene	40.0	45.9	115	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	102	86 - 118	PASS
1,2-Dichloroethane-d4	87.8	80 - 120	PASS
Toluene-d8	103	88 - 110	PASS
4-Bromofluorobenzene	94.2	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3269154
Report generated: 12/23/2013 09:31

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/18/2013 Sample ID: WG456797-02
Instrument ID: HPMS8 Run Time: 11:14 Prep Method: 5030B/5030C/503
File ID: 8M393429 Analyst: MES Method: 8260B
Workgroup (AAB#): WG456797 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD61695 Cal ID: HPMS8-13-OCT-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	21.3	106	40 - 180	
Benzene	20.0	19.3	96.6	80 - 121	
Bromobenzene	20.0	21.0	105	80 - 120	
Bromochloromethane	20.0	22.9	114	65 - 130	
Bromodichloromethane	20.0	19.2	96.1	80 - 131	
Bromoform	20.0	20.2	101	70 - 130	
Bromomethane	20.0	18.1	90.6	30 - 145	
2-Butanone	20.0	15.5	77.3	10 - 170	
n-Butylbenzene	20.0	19.4	97.1	80 - 131	
sec-Butylbenzene	20.0	21.4	107	80 - 127	
tert-Butylbenzene	20.0	21.9	110	80 - 126	
Carbon disulfide	20.0	19.9	99.3	58 - 128	
Carbon tetrachloride	20.0	21.8	109	65 - 140	
Chlorobenzene	20.0	21.7	109	80 - 120	
Chlorodibromomethane	20.0	20.8	104	60 - 135	
Chloroethane	20.0	18.4	91.9	60 - 135	
2-Chloroethyl vinyl ether	20.0	14.1	70.5	45 - 160	
Chloroform	20.0	19.8	99.0	80 - 125	
Chloromethane	20.0	17.7	88.5	40 - 125	
2-Chlorotoluene	20.0	21.4	107	80 - 127	
4-Chlorotoluene	20.0	19.0	94.8	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	14.2	71.1	50 - 130	
1,2-Dibromoethane	20.0	18.6	93.0	80 - 129	
Dibromomethane	20.0	18.9	94.5	75 - 125	
1,2-Dichlorobenzene	20.0	20.7	103	80 - 125	
1,3-Dichlorobenzene	20.0	21.7	109	80 - 120	
1,4-Dichlorobenzene	20.0	20.5	102	80 - 120	
Dichlorodifluoromethane	20.0	26.0	130	40 - 160	
1,1-Dichloroethane	20.0	18.9	94.7	80 - 125	
1,2-Dichloroethane	20.0	18.1	90.7	80 - 129	
1,1-Dichloroethene	20.0	17.6	88.0	80 - 132	
cis-1,2-Dichloroethene	20.0	20.5	103	70 - 125	
trans-1,2-Dichloroethene	20.0	18.4	91.8	80 - 127	
1,2-Dichloropropane	20.0	17.4	87.1	80 - 120	
1,3-Dichloropropane	20.0	16.7	83.3	80 - 120	
2,2-Dichloropropane	20.0	22.5	112	80 - 133	
cis-1,3-Dichloropropene	20.0	20.2	101	70 - 130	
trans-1,3-Dichloropropene	20.0	17.6	87.9	80 - 130	
1,1-Dichloropropene	20.0	20.0	100	75 - 130	
Ethylbenzene	20.0	19.9	99.5	80 - 122	
2-Hexanone	20.0	14.3	71.4	55 - 130	

LCS - Modified 03/06/2008
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Report generated: 12/23/2013 09:31

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/18/2013 Sample ID: WG456797-02
Instrument ID: HPMS8 Run Time: 11:14 Prep Method: 5030B/5030C/503
File ID: 8M393429 Analyst: MES Method: 8260B
Workgroup (AAB#): WG456797 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD61695 Cal ID: HPMS8-13-OCT-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	20.6	103	72 - 132	
Isopropylbenzene	20.0	22.1	111	80 - 122	
p-Isopropyltoluene	20.0	21.4	107	80 - 122	
4-Methyl-2-pentanone	20.0	15.1	75.3	64 - 140	
Methylene chloride	20.0	19.1	95.5	80 - 123	
Naphthalene	20.0	17.5	87.7	59 - 149	
n-Propylbenzene	20.0	20.2	101	80 - 129	
Styrene	20.0	21.3	106	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	20.7	104	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	15.7	78.6	79 - 125	*
Tetrachloroethene	20.0	23.8	119	80 - 124	
Toluene	20.0	20.3	101	80 - 124	
1,2,3-Trichlorobenzene	20.0	19.1	95.3	55 - 140	
1,2,4-Trichlorobenzene	20.0	20.0	99.9	65 - 135	
1,1,1-Trichloroethane	20.0	21.7	108	80 - 134	
1,1,2-Trichloroethane	20.0	19.0	94.9	80 - 125	
Trichloroethene	20.0	21.7	108	80 - 122	
Trichlorofluoromethane	20.0	21.5	108	62 - 151	
1,2,3-Trichloropropane	20.0	17.2	86.0	75 - 125	
1,2,4-Trimethylbenzene	20.0	20.5	102	80 - 125	
1,3,5-Trimethylbenzene	20.0	21.4	107	80 - 127	
Vinyl acetate	20.0	17.6	88.1	10 - 190	
Vinyl chloride	20.0	22.1	110	50 - 170	
o-Xylene	20.0	21.1	106	80 - 122	
m-,p-Xylene	40.0	44.1	110	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	98.4	86 - 118	PASS
1,2-Dichloroethane-d4	84.3	80 - 120	PASS
Toluene-d8	98.5	88 - 110	PASS
4-Bromofluorobenzene	90.6	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3269154
Report generated: 12/23/2013 09:31

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/18/2013 Sample ID: WG456874-02
Instrument ID: HPMS9 Run Time: 15:49 Prep Method: 5030B/5030C/503
File ID: 9M960328 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG456874 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD61695 Cal ID: HPMS9-11-DEC-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	34.4	172	40 - 180	
Benzene	20.0	20.9	105	80 - 121	
Bromobenzene	20.0	21.8	109	80 - 120	
Bromochloromethane	20.0	22.4	112	65 - 130	
Bromodichloromethane	20.0	21.2	106	80 - 131	
Bromoform	20.0	22.7	114	70 - 130	
Bromomethane	20.0	19.9	99.6	30 - 145	
2-Butanone	20.0	26.3	131	10 - 170	
n-Butylbenzene	20.0	23.4	117	80 - 131	
sec-Butylbenzene	20.0	23.5	118	80 - 127	
tert-Butylbenzene	20.0	22.4	112	80 - 126	
Carbon disulfide	20.0	20.4	102	58 - 128	
Carbon tetrachloride	20.0	21.5	107	65 - 140	
Chlorobenzene	20.0	22.4	112	80 - 120	
Chlorodibromomethane	20.0	22.6	113	60 - 135	
Chloroethane	20.0	20.7	104	60 - 135	
2-Chloroethyl vinyl ether	20.0	19.9	99.7	45 - 160	
Chloroform	20.0	21.9	110	80 - 125	
Chloromethane	20.0	24.4	122	40 - 125	
2-Chlorotoluene	20.0	21.1	106	80 - 127	
4-Chlorotoluene	20.0	24.6	123	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	25.6	128	50 - 130	
1,2-Dibromoethane	20.0	21.8	109	80 - 129	
Dibromomethane	20.0	22.6	113	75 - 125	
1,2-Dichlorobenzene	20.0	23.4	117	80 - 125	
1,3-Dichlorobenzene	20.0	22.7	114	80 - 120	
1,4-Dichlorobenzene	20.0	21.6	108	80 - 120	
Dichlorodifluoromethane	20.0	32.2	161	40 - 160	*
1,1-Dichloroethane	20.0	21.2	106	80 - 125	
1,2-Dichloroethane	20.0	21.5	107	80 - 129	
1,1-Dichloroethene	20.0	20.4	102	80 - 132	
cis-1,2-Dichloroethene	20.0	20.1	101	70 - 125	
trans-1,2-Dichloroethene	20.0	20.5	103	80 - 127	
1,2-Dichloropropane	20.0	21.1	106	80 - 120	
1,3-Dichloropropane	20.0	21.9	110	80 - 120	
2,2-Dichloropropane	20.0	20.0	100	80 - 133	
cis-1,3-Dichloropropene	20.0	21.7	109	70 - 130	
trans-1,3-Dichloropropene	20.0	20.7	104	80 - 130	
1,1-Dichloropropene	20.0	21.0	105	75 - 130	
Ethylbenzene	20.0	21.3	106	80 - 122	
2-Hexanone	20.0	26.5	132	55 - 130	*

LCS - Modified 03/06/2008
PDF File ID: 3269154
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Login Number: L13120753 Run Date: 12/18/2013 Sample ID: WG456874-02
Instrument ID: HPMS9 Run Time: 15:49 Prep Method: 5030B/5030C/503
File ID: 9M960328 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG456874 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD61695 Cal ID: HPMS9-11-DEC-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	21.7	109	72 - 132	
Isopropylbenzene	20.0	22.9	114	80 - 122	
p-Isopropyltoluene	20.0	22.7	114	80 - 122	
4-Methyl-2-pentanone	20.0	23.5	118	64 - 140	
Methylene chloride	20.0	20.9	105	80 - 123	
Naphthalene	20.0	25.1	125	59 - 149	
n-Propylbenzene	20.0	23.1	116	80 - 129	
Styrene	20.0	21.9	109	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	20.6	103	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	25.3	126	79 - 125	*
Tetrachloroethene	20.0	21.5	107	80 - 124	
Toluene	20.0	21.7	108	80 - 124	
1,2,3-Trichlorobenzene	20.0	23.9	119	55 - 140	
1,2,4-Trichlorobenzene	20.0	23.9	120	65 - 135	
1,1,1-Trichloroethane	20.0	21.6	108	80 - 134	
1,1,2-Trichloroethane	20.0	22.0	110	80 - 125	
Trichloroethene	20.0	19.7	98.4	80 - 122	
Trichlorofluoromethane	20.0	23.3	116	62 - 151	
1,2,3-Trichloropropane	20.0	22.2	111	75 - 125	
1,2,4-Trimethylbenzene	20.0	22.8	114	80 - 125	
1,3,5-Trimethylbenzene	20.0	22.5	112	80 - 127	
Vinyl acetate	20.0	20.9	105	10 - 190	
Vinyl chloride	20.0	14.8	73.8	50 - 170	
o-Xylene	20.0	22.6	113	80 - 122	
m-,p-Xylene	40.0	44.7	112	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	99.8	86 - 118	PASS
1,2-Dichloroethane-d4	97.3	80 - 120	PASS
Toluene-d8	103	88 - 110	PASS
4-Bromofluorobenzene	98.9	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3269154
Report generated: 12/23/2013 09:31

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Analyst: ADC/MES Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG456605 Units: ug/L
QC Key: STD Lot #: STD61695

Sample ID: WG456605-02 LCS File ID: 6M122463 Run Date: 12/17/2013 12:39
Sample ID: WG456605-03 LCS2 File ID: 6M122464 Run Date: 12/17/2013 13:10

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	21.0	105	20.0	21.3	106	1.32	80 - 130	20	
1,1,1-Trichloroethane	20.0	23.0	115	20.0	23.5	117	2.20	80 - 134	20	
1,1,2,2-Tetrachloroethane	20.0	18.5	92.5	20.0	18.9	94.5	2.16	79 - 125	20	
1,1,2-Trichloroethane	20.0	20.2	101	20.0	20.5	103	1.51	80 - 125	20	
1,1-Dichloroethane	20.0	21.1	106	20.0	21.6	108	2.08	80 - 125	20	
1,1-Dichloroethene	20.0	21.2	106	20.0	21.7	108	2.47	80 - 132	20	
1,1-Dichloropropene	20.0	21.4	107	20.0	21.7	109	1.61	75 - 130	20	
1,2,3-Trichlorobenzene	20.0	19.1	95.7	20.0	19.5	97.3	1.72	55 - 140	20	
1,2,3-Trichloropropane	20.0	18.6	93.2	20.0	19.0	95.2	2.15	75 - 125	20	
1,2,4-Trichlorobenzene	20.0	19.5	97.4	20.0	19.8	99.1	1.78	65 - 135	20	
1,2,4-Trimethylbenzene	20.0	22.4	112	20.0	22.9	115	2.44	80 - 125	20	
1,2-Dibromo-3-chloropropane	20.0	17.6	88.2	20.0	17.8	89.1	1.07	50 - 130	20	
1,2-Dibromoethane	20.0	19.5	97.6	20.0	19.4	97.0	0.559	80 - 129	20	
1,2-Dichlorobenzene	20.0	21.0	105	20.0	21.5	108	2.41	80 - 125	20	
1,2-Dichloroethane	20.0	20.7	104	20.0	20.9	104	0.886	80 - 129	20	
1,2-Dichloropropane	20.0	19.3	96.3	20.0	19.8	98.8	2.62	80 - 120	20	
1,3,5-Trimethylbenzene	20.0	23.0	115	20.0	23.8	119	3.56	80 - 127	20	
1,3-Dichlorobenzene	20.0	21.7	109	20.0	22.5	113	3.48	80 - 120	20	
1,3-Dichloropropane	20.0	19.6	97.9	20.0	19.8	99.2	1.34	80 - 120	20	
1,4-Dichlorobenzene	20.0	20.3	102	20.0	20.6	103	1.67	80 - 120	20	
2,2-Dichloropropane	20.0	22.9	114	20.0	23.4	117	2.06	80 - 133	20	
2-Butanone	20.0	19.0	95.0	20.0	19.1	95.4	0.443	10 - 170	20	
2-Chloroethyl vinyl ether	20.0	30.4	152	20.0	31.8	159	4.76	45 - 160	20	
2-Chlorotoluene	20.0	22.7	114	20.0	23.7	118	4.11	80 - 127	20	
2-Hexanone	20.0	16.9	84.4	20.0	17.2	86.0	1.88	55 - 130	20	
4-Chlorotoluene	20.0	22.0	110	20.0	22.2	111	1.04	80 - 126	20	
4-Methyl-2-pentanone	20.0	16.7	83.5	20.0	16.9	84.6	1.31	64 - 140	20	
Acetone	20.0	23.3	117	20.0	23.1	115	1.26	40 - 180	20	
Benzene	20.0	20.6	103	20.0	21.1	105	2.29	80 - 121	20	
Bromobenzene	20.0	21.2	106	20.0	22.0	110	3.40	80 - 120	20	
Bromochloromethane	20.0	21.6	108	20.0	21.8	109	0.996	65 - 130	20	
Bromodichloromethane	20.0	20.6	103	20.0	20.9	105	1.50	80 - 131	20	
Bromoform	20.0	18.7	93.7	20.0	19.0	95.2	1.57	70 - 130	20	
Bromomethane	20.0	18.5	92.4	20.0	19.7	98.5	6.45	30 - 145	20	
Carbon disulfide	20.0	21.0	105	20.0	21.4	107	1.69	58 - 128	20	
Carbon tetrachloride	20.0	23.4	117	20.0	23.8	119	1.52	65 - 140	20	
Chlorobenzene	20.0	21.3	106	20.0	21.6	108	1.47	80 - 120	20	
Chloroethane	20.0	19.9	99.4	20.0	20.1	101	1.29	60 - 135	20	
Chloroform	20.0	22.4	112	20.0	22.8	114	1.73	80 - 125	20	
Chloromethane	20.0	19.2	95.9	20.0	19.6	98.2	2.42	40 - 125	20	

LCS_LCS2 - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Analyst: ADC/MES Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG456605 Units: ug/L
QC Key: STD Lot #: STD61695

Sample ID: WG456605-02 LCS File ID: 6M122463 Run Date: 12/17/2013 12:39
Sample ID: WG456605-03 LCS2 File ID: 6M122464 Run Date: 12/17/2013 13:10

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,2-Dichloroethene	20.0	21.0	105	20.0	21.5	107	2.40	70 - 125	20	
cis-1,3-Dichloropropene	20.0	21.0	105	20.0	21.3	107	1.64	70 - 130	20	
Chlorodibromomethane	20.0	21.7	109	20.0	21.8	109	0.272	60 - 135	20	
Dibromomethane	20.0	18.9	94.6	20.0	19.3	96.7	2.14	75 - 125	20	
Dichlorodifluoromethane	20.0	30.6	153	20.0	31.1	156	1.73	40 - 160	20	
Ethylbenzene	20.0	21.2	106	20.0	21.7	108	2.51	80 - 122	20	
Hexachlorobutadiene	20.0	19.9	99.3	20.0	20.9	104	4.94	72 - 132	20	
Isopropylbenzene	20.0	22.5	113	20.0	22.9	115	1.71	80 - 122	20	
m-,p-Xylene	40.0	43.4	108	40.0	44.2	110	1.88	80 - 122	20	
Methylene chloride	20.0	19.0	95.2	20.0	19.4	97.1	1.95	80 - 123	20	
n-Butylbenzene	20.0	22.1	111	20.0	22.8	114	3.25	80 - 131	20	
n-Propylbenzene	20.0	22.8	114	20.0	23.5	117	2.85	80 - 129	20	
Naphthalene	20.0	17.9	89.6	20.0	18.5	92.5	3.23	59 - 149	20	
o-Xylene	20.0	21.6	108	20.0	22.0	110	1.81	80 - 122	20	
p-Isopropyltoluene	20.0	22.5	112	20.0	23.2	116	3.13	80 - 122	20	
sec-Butylbenzene	20.0	23.0	115	20.0	23.5	118	2.25	80 - 127	20	
Styrene	20.0	21.1	105	20.0	21.5	108	2.08	80 - 123	20	
tert-Butylbenzene	20.0	23.0	115	20.0	23.1	115	0.447	80 - 126	20	
Tetrachloroethene	20.0	22.3	112	20.0	22.5	112	0.734	80 - 124	20	
Toluene	20.0	21.8	109	20.0	22.0	110	0.720	80 - 124	20	
trans-1,2-Dichloroethene	20.0	21.2	106	20.0	21.8	109	2.72	80 - 127	20	
trans-1,3-Dichloropropene	20.0	19.3	96.5	20.0	19.8	99.2	2.82	80 - 130	20	
Trichloroethene	20.0	21.4	107	20.0	21.8	109	1.95	80 - 122	20	
Trichlorofluoromethane	20.0	25.5	127	20.0	26.2	131	2.89	62 - 151	20	
Vinyl acetate	20.0	23.6	118	20.0	24.4	122	3.09	10 - 190	20	
Vinyl chloride	20.0	22.5	112	20.0	22.7	114	1.25	50 - 170	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	95.1	95.0	80 - 120	PASS
Dibromofluoromethane	95.6	95.6	86 - 118	PASS
4-Bromofluorobenzene	93.0	94.4	86 - 115	PASS
Toluene-d8	97.4	97.2	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3271977
Report generated: 12/23/2013 09:31

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13120753 Cal ID: HPMS8- 13-OCT-13 Worknum: WG456453

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13120753-03 File ID: 8M393372 Dil: 1 Method: 5035A

Sample ID: L13120753-04 MS File ID: 8M393365 Dil: 1 Matrix: 8260B

Sample ID: L13120753-05 MSD File ID: 8M393366 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	21.6	108	20.0	21.5	108	0.483	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	22.5	112	20.0	21.5	108	4.31	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	16.8	84.1	20.0	16.7	83.5	0.673	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	20.0	99.9	20.0	19.9	99.7	0.132	80 - 125	20	
1,1-Dichloroethane	ND	20.0	18.9	94.5	20.0	19.2	95.9	1.40	80 - 125	20	
1,1-Dichloroethene	ND	20.0	17.8	88.8	20.0	17.9	89.4	0.753	80 - 132	20	
1,1-Dichloropropene	ND	20.0	19.7	98.4	20.0	19.2	96	2.42	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	20.0	100	20.0	19.8	98.8	1.42	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	18.5	92.6	20.0	18.2	91.2	1.45	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	21.5	108	20.0	20.7	103	3.83	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	21.0	105	20.0	20.6	103	2.15	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	15.5	77.5	20.0	15.1	75.7	2.32	50 - 130	20	
1,2-Dibromoethane	ND	20.0	19.8	99	20.0	19.9	99.3	0.285	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	22.2	111	20.0	21.5	107	3.44	80 - 125	20	
1,2-Dichloroethane	ND	20.0	19.3	96.3	20.0	18.8	94	2.40	80 - 129	20	
1,2-Dichloropropane	ND	20.0	17.8	89.2	20.0	18.0	89.9	0.802	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	21.6	108	20.0	21.3	107	1.11	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	22.6	113	20.0	22.3	111	1.47	80 - 120	20	
1,3-Dichloropropane	ND	20.0	18.0	90	20.0	18.0	90	0.0229	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	21.2	106	20.0	21.0	105	1.06	80 - 120	20	
2,2-Dichloropropane	ND	20.0	23.3	117	20.0	23.2	116	0.651	80 - 133	20	
2-Butanone	ND	20.0	12.4	61.8	20.0	11.2	55.9	10.1	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	20.9	105	20.0	20.5	103	1.90	80 - 127	20	
2-Hexanone	ND	20.0	13.1	65.7	20.0	13.4	67	1.91	55 - 130	20	
4-Chlorotoluene	ND	20.0	20.2	101	20.0	19.9	99.6	1.51	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	13.9	69.4	20.0	13.6	68.2	1.69	64 - 140	20	
Acetone	ND	20.0	15.8	79.1	20.0	15.3	76.3	3.59	40 - 180	20	
Benzene	ND	20.0	19.5	97.6	20.0	19.7	98.5	0.850	80 - 121	20	
Bromobenzene	ND	20.0	22.1	110	20.0	21.7	108	1.85	80 - 120	20	
Bromochloromethane	ND	20.0	23.6	118	20.0	23.6	118	0.170	65 - 130	20	
Bromodichloromethane	ND	20.0	20.8	104	20.0	19.9	99.6	4.16	80 - 131	20	
Bromoform	ND	20.0	22.4	112	20.0	21.0	105	6.31	70 - 130	20	
Bromomethane	ND	20.0	18.9	94.3	20.0	18.9	94.5	0.180	30 - 145	20	
Carbon disulfide	ND	20.0	18.1	90.7	20.0	18.4	91.9	1.32	58 - 128	20	
Carbon tetrachloride	ND	20.0	22.3	111	20.0	21.6	108	3.16	65 - 140	20	
Chlorobenzene	ND	20.0	22.5	112	20.0	22.8	114	1.26	80 - 120	20	
Chloroethane	ND	20.0	18.1	90.3	20.0	18.3	91.3	1.12	60 - 135	20	
Chloroform	ND	20.0	20.3	102	20.0	20.3	101	0.122	80 - 125	20	
Chloromethane	ND	20.0	16.9	84.5	20.0	17.8	88.9	5.11	40 - 125	20	
cis-1,2-Dichloroethene	ND	20.0	20.9	104	20.0	21.7	108	3.59	70 - 125	20	

MS_MSD - Modified 03/06/2008

PDF File ID: 3269155

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13120753 Cal ID: HPMS8 13-OCT-13 Worknum: WG456453

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13120753-03 File ID: 8M393372 Dil: 1 Method: 5035A

Sample ID: L13120753-04 MS File ID: 8M393365 Dil: 1 Matrix: 8260B

Sample ID: L13120753-05 MSD File ID: 8M393366 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	21.2	106	20.0	20.8	104	1.62	70 - 130	20	
Chlorodibromomethane	ND	20.0	22.5	113	20.0	22.1	110	1.95	60 - 135	20	
Dibromomethane	ND	20.0	20.8	104	20.0	20.7	103	0.724	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	27.2	136	20.0	26.4	132	3.03	50 - 160	20	
Ethylbenzene	ND	20.0	20.8	104	20.0	20.9	104	0.617	80 - 122	20	
Hexachlorobutadiene	ND	20.0	21.4	107	20.0	20.4	102	4.79	72 - 132	20	
Isopropylbenzene	ND	20.0	22.5	113	20.0	22.7	114	0.925	80 - 122	20	
m-,p-Xylene	ND	40.0	43.8	110	40.0	44.2	110	0.782	80 - 122	20	
Methylene chloride	ND	20.0	19.5	97.5	20.0	18.9	94.6	3.07	80 - 123	20	
n-Butylbenzene	ND	20.0	19.9	99.3	20.0	19.8	98.9	0.390	80 - 131	20	
n-Propylbenzene	ND	20.0	20.3	102	20.0	20.1	101	1.02	80 - 129	20	
Naphthalene	ND	20.0	19.0	95.2	20.0	18.4	92.2	3.21	59 - 149	20	
o-Xylene	ND	20.0	21.8	109	20.0	22.4	112	2.82	80 - 122	20	
p-Isopropyltoluene	ND	20.0	21.8	109	20.0	21.7	108	0.699	80 - 122	20	
sec-Butylbenzene	ND	20.0	21.5	108	20.0	21.5	107	0.194	80 - 127	20	
Styrene	ND	20.0	21.9	110	20.0	22.0	110	0.568	80 - 123	20	
tert-Butylbenzene	ND	20.0	21.8	109	20.0	21.4	107	1.60	80 - 126	20	
Tetrachloroethene	ND	20.0	23.9	119	20.0	24.0	120	0.431	80 - 124	20	
Toluene	ND	20.0	20.4	102	20.0	20.9	104	2.09	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	18.2	91	20.0	17.9	89.5	1.63	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	19.1	95.5	20.0	18.8	94.1	1.47	80 - 130	20	
Trichloroethene	5.09	20.0	26.3	106	20.0	25.9	104	1.35	80 - 122	20	
Trichlorofluoromethane	ND	20.0	21.8	109	20.0	21.3	106	2.45	62 - 151	20	
Vinyl acetate	ND	20.0	18.7	93.4	20.0	18.2	90.9	2.70	10 - 190	20	
Vinyl chloride	ND	20.0	21.5	108	20.0	21.6	108	0.221	50 - 170	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

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Report generated 12/23/2013 09:31

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13120753 Cal ID: HPMS9- 11-DEC-13 Worknum: WG456874

Instrument ID: HPMS9 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13120753-31 File ID: 9M960335 Dil: 1 Method: 5035A

Sample ID: L13120753-32 MS File ID: 9M960329 Dil: 1 Matrix: 8260B

Sample ID: L13120753-33 MSD File ID: 9M960330 Dil: 1 Units: Water ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	21.2	106	20.0	20.6	103	2.93	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	22.2	111	20.0	21.0	105	5.45	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	28.1	140	20.0	26.6	133	5.47	79 - 125	20	*
1,1,2-Trichloroethane	ND	20.0	22.2	111	20.0	21.6	108	2.88	80 - 125	20	
1,1-Dichloroethane	4.84	20.0	26.8	110	20.0	25.8	105	3.85	80 - 125	20	
1,1-Dichloroethene	49.8	20.0	66.2	82.4	20.0	63.5	68.5	4.30	80 - 132	20	*
1,1-Dichloropropene	ND	20.0	21.8	109	20.0	20.7	103	5.07	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	25.0	125	20.0	24.1	121	3.58	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	23.9	119	20.0	22.7	114	5.02	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	25.6	128	20.0	24.0	120	6.29	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	24.7	124	20.0	23.1	115	6.90	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	26.7	133	20.0	25.4	127	5.10	50 - 130	20	*
1,2-Dibromoethane	ND	20.0	22.7	114	20.0	21.4	107	5.98	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	24.8	124	20.0	23.5	118	5.31	80 - 125	20	
1,2-Dichloroethane	0.325	20.0	22.9	113	20.0	22.1	109	3.24	80 - 129	20	
1,2-Dichloropropane	ND	20.0	21.9	109	20.0	21.0	105	4.17	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	24.6	123	20.0	22.9	115	6.88	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	24.6	123	20.0	22.9	114	7.03	80 - 120	20	*
1,3-Dichloropropane	ND	20.0	22.6	113	20.0	21.4	107	5.56	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	23.4	117	20.0	22.0	110	6.11	80 - 120	20	
2,2-Dichloropropane	ND	20.0	23.6	118	20.0	21.8	109	7.70	80 - 133	20	
2-Butanone	ND	20.0	20.6	103	20.0	22.5	113	8.69	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	23.1	116	20.0	22.6	113	2.45	80 - 127	20	
2-Hexanone	ND	20.0	21.1	105	20.0	22.3	111	5.56	55 - 130	20	
4-Chlorotoluene	ND	20.0	26.8	134	20.0	24.1	120	10.7	80 - 126	20	*
4-Methyl-2-pentanone	ND	20.0	20.2	101	20.0	21.6	108	6.35	64 - 140	20	
Acetone	ND	20.0	23.8	119	20.0	24.6	123	3.47	40 - 180	20	
Benzene	0.207	20.0	21.8	108	20.0	21.1	105	3.06	80 - 121	20	
Bromobenzene	ND	20.0	23.5	117	20.0	21.8	109	7.42	80 - 120	20	
Bromochloromethane	ND	20.0	22.8	114	20.0	21.7	108	5.16	65 - 130	20	
Bromodichloromethane	ND	20.0	21.9	110	20.0	21.0	105	4.09	80 - 131	20	
Bromoform	ND	20.0	23.0	115	20.0	21.7	109	5.46	70 - 130	20	
Bromomethane	ND	20.0	20.4	102	20.0	20.3	101	0.601	30 - 145	20	
Carbon disulfide	ND	20.0	17.8	89.1	20.0	18.8	93.9	5.30	58 - 128	20	
Carbon tetrachloride	ND	20.0	21.9	110	20.0	20.9	104	4.83	65 - 140	20	
Chlorobenzene	0.239	20.0	23.8	118	20.0	22.6	112	4.93	80 - 120	20	
Chloroethane	ND	20.0	21.7	109	20.0	20.3	101	6.96	60 - 135	20	
Chloroform	0.168	20.0	22.8	113	20.0	21.7	107	5.00	80 - 125	20	
Chloromethane	ND	20.0	24.2	121	20.0	23.3	116	4.01	40 - 125	20	
cis-1,2-Dichloroethene	13.2	20.0	34.2	105	20.0	32.9	98.7	3.92	70 - 125	20	

MS_MSD - Modified 03/06/2008

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L13120753 Cal ID: HPMS9 11-DEC-13 Worknum: WG456874

Instrument ID: HPMS9 Contract #: Prep Method: 5030B/5030C/

Parent ID: L13120753-31 File ID: 9M960335 Dil: 1 Method: 5035A

Sample ID: L13120753-32 MS File ID: 9M960329 Dil: 1 Matrix: 8260B

Sample ID: L13120753-33 MSD File ID: 9M960330 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	22.7	114	20.0	22.2	111	2.07	70 - 130	20	
Chlorodibromomethane	ND	20.0	23.2	116	20.0	21.9	109	5.69	60 - 135	20	
Dibromomethane	ND	20.0	23.5	118	20.0	22.5	113	4.35	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	31.8	159	20.0	30.0	150	5.90	50 - 160	20	
Ethylbenzene	ND	20.0	22.5	113	20.0	21.8	109	3.45	80 - 122	20	
Hexachlorobutadiene	ND	20.0	24.0	120	20.0	22.5	113	6.25	72 - 132	20	
Isopropylbenzene	ND	20.0	23.8	119	20.0	22.4	112	5.96	80 - 122	20	
m-,p-Xylene	ND	40.0	46.8	117	40.0	44.1	110	5.97	80 - 122	20	
Methylene chloride	ND	20.0	21.4	107	20.0	20.5	103	4.34	80 - 123	20	
n-Butylbenzene	ND	20.0	26.0	130	20.0	24.5	122	6.07	80 - 131	20	
n-Propylbenzene	ND	20.0	25.1	125	20.0	23.5	118	6.36	80 - 129	20	
Naphthalene	ND	20.0	26.0	130	20.0	24.8	124	5.00	59 - 149	20	
o-Xylene	ND	20.0	23.3	117	20.0	22.2	111	5.07	80 - 122	20	
p-Isopropyltoluene	ND	20.0	24.8	124	20.0	23.4	117	5.88	80 - 122	20	*
sec-Butylbenzene	ND	20.0	25.6	128	20.0	23.9	120	6.98	80 - 127	20	*
Styrene	ND	20.0	23.2	116	20.0	21.9	110	5.79	80 - 123	20	
tert-Butylbenzene	ND	20.0	24.2	121	20.0	23.1	115	4.64	80 - 126	20	
Tetrachloroethene	23.9	20.0	44.9	105	20.0	42.1	90.7	6.57	80 - 124	20	
Toluene	ND	20.0	22.8	114	20.0	21.5	108	5.76	80 - 124	20	
trans-1,2-Dichloroethene	0.481	20.0	21.9	107	20.0	20.9	102	4.35	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	22.1	111	20.0	21.0	105	5.22	80 - 130	20	
Trichloroethene	72.6	20.0	88.5	79.6	20.0	84.2	58.2	4.95	80 - 122	20	*
Trichlorofluoromethane	ND	20.0	23.9	119	20.0	22.5	112	6.02	62 - 151	20	
Vinyl acetate	ND	20.0	28.7	144	20.0	27.6	138	3.92	10 - 190	20	
Vinyl chloride	3.90	20.0	20.8	84.6	20.0	21.0	85.6	1.02	50 - 170	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3269155

Report generated 12/23/2013 09:31

METHOD BLANK SUMMARY

Login Number: L13120753
Blank File ID: T2.122013.183108
Prep Date: 12/20/13 10:52
Analyzed Date: 12/20/13 18:31
Analyst: QX

Work Group: WG457227
Blank Sample ID: WG457198-03
Instrument ID: ICP-THERMO2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG457198-04	T2.122013.183442	12/20/13 18:34	01
35B WW09	L13120753-01	T2.122013.192308	12/20/13 19:23	01
35B WW08	L13120753-02	T2.122013.192639	12/20/13 19:26	01
MW1-1	L13120753-03	T2.122013.193009	12/20/13 19:30	01
MW1-1	L13120753-04	T2.122013.193341	12/20/13 19:33	01
MW1-1	L13120753-05	T2.122013.193659	12/20/13 19:36	01
MW1-2	L13120753-07	T2.122013.194016	12/20/13 19:40	01
FIELD BLANK 4DEC2013	L13120753-08	T2.122013.194346	12/20/13 19:43	01
35BWW10	L13120753-09	T2.122013.195414	12/20/13 19:54	01
MW2-1	L13120753-10	T2.122013.195743	12/20/13 19:57	01
MW2-2	L13120753-11	T2.122013.200115	12/20/13 20:01	01
MW2-3	L13120753-12	T2.122013.200441	12/20/13 20:04	01
MW3-1	L13120753-13	T2.122013.200811	12/20/13 20:08	01
MW3-2	L13120753-15	T2.122013.201143	12/20/13 20:11	01
MW3-2D	L13120753-16	T2.122013.201514	12/20/13 20:15	01
35B WW09	L13120753-01	T2.123013.134046	12/30/13 13:40	02
35B WW08	L13120753-02	T2.123013.134417	12/30/13 13:44	02
MW1-1	L13120753-03	T2.123013.134748	12/30/13 13:47	02
MW1-1	L13120753-04	T2.123013.135120	12/30/13 13:51	02
MW1-1	L13120753-05	T2.123013.140135	12/30/13 14:01	02
MW1-2	L13120753-07	T2.123013.140453	12/30/13 14:04	02
FIELD BLANK 4DEC2013	L13120753-08	T2.123013.140826	12/30/13 14:08	02
35BWW10	L13120753-09	T2.123013.141201	12/30/13 14:12	02
MW2-1	L13120753-10	T2.123013.141532	12/30/13 14:15	02
MW2-2	L13120753-11	T2.123013.141904	12/30/13 14:19	02
MW2-3	L13120753-12	T2.123013.142230	12/30/13 14:22	02
MW3-1	L13120753-13	T2.123013.142559	12/30/13 14:25	02
MW3-2	L13120753-15	T2.123013.142931	12/30/13 14:29	02
MW3-2D	L13120753-16	T2.123013.143302	12/30/13 14:33	02

Report Name: BLANK_SUMMARY
PDF File ID: 3280035
Report generated 12/30/2013 16:21

METHOD BLANK SUMMARY

Login Number: L13120753
Blank File ID: T2.122413.205637
Prep Date: 12/20/13 13:33
Analyzed Date: 12/24/13 20:56
Analyst: PDM

Work Group: WG457252
Blank Sample ID: WG457236-02
Instrument ID: ICP-THERMO2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG457236-03	T2.122213.124725	12/22/13 12:47	01
LCS	WG457236-03	T2.122413.210010	12/24/13 21:00	02
FLT_BLK	WG457236-04	T2.122413.210327	12/24/13 21:03	01
MW3-3	L13120753-17	T2.122413.210702	12/24/13 21:07	01
MW-58	L13120753-19	T2.122413.211033	12/24/13 21:10	01
35B WW03	L13120753-20	T2.122413.211403	12/24/13 21:14	01
35B WW20	L13120753-21	T2.122413.211735	12/24/13 21:17	01
35B WW04	L13120753-22	T2.122413.213818	12/24/13 21:38	01
FIELD BLANK 9DEC 2013	L13120753-23	T2.122413.214147	12/24/13 21:41	01
35B WW12	L13120753-24	T2.122413.214521	12/24/13 21:45	01
35B WW05	L13120753-25	T2.122413.214851	12/24/13 21:48	01
35B WW06	L13120753-26	T2.122413.215220	12/24/13 21:52	01
MW 4-1	L13120753-27	T2.122413.215549	12/24/13 21:55	01
MW 4-1D	L13120753-28	T2.122413.215919	12/24/13 21:59	01
MW 4-2	L13120753-30	T2.122413.220249	12/24/13 22:02	01
35B WW14	L13120753-31	T2.122413.220620	12/24/13 22:06	02
35B WW14 MS	L13120753-32	T2.122413.220951	12/24/13 22:09	02
35B WW14 MSD	L13120753-33	T2.122413.222008	12/24/13 22:20	02
35B WW17	L13120753-34	T2.122413.222326	12/24/13 22:23	01

Report Name: BLANK_SUMMARY
PDF File ID: 3280035
Report generated 12/30/2013 16:21

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13120753 Prep Date:12/20/13 10:52 Sample ID:WG457198-03
Instrument ID:ICP-THERMO2 Run Date:12/20/13 18:31 Prep Method:3015
File ID:T2.122013.183108 Analyst:QX Method:6010B
Workgroup (AAB#):WG457227 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-TH-20-DEC-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3280036
30-DEC-2013 16:21

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13120753 Prep Date: 12/20/13 13:33 Sample ID: WG457236-02
Instrument ID: ICP-THERMO2 Run Date: 12/24/13 20:56 Prep Method: 3015
File ID: T2.122413.205637 Analyst: PDM Method: 6010B
Workgroup (AAB#): WG457252 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-24-DEC-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3280036
30-DEC-2013 16:21

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/20/2013 Sample ID: WG457198-04
Instrument ID: ICP-THERMO2 Run Time: 18:34 Prep Method: 3015
File ID: T2.122013.183442 Analyst: QX Method: 6010B
Workgroup (AAB#): WG457227 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD61828 Cal ID: ICP-TH-20-DEC-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.10	97.6	85 - 115	
Calcium, Total	6.25	5.78	92.5	85 - 115	
Iron, Total	2.50	2.45	97.9	85 - 115	
Magnesium, Total	6.25	6.33	101	85 - 115	
Potassium, Total	31.3	30.6	98.1	85 - 115	
Sodium, Total	31.3	31.3	100	85 - 115	
Strontium, Total	0.625	0.623	99.7	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3280037
Report generated: 12/30/2013 16:21

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/24/2013 Sample ID: WG457236-03
Instrument ID: ICP-THERMO2 Run Time: 21:00 Prep Method: 3015
File ID: T2.122413.210010 Analyst: PDM Method: 6010B
Workgroup (AAB#): WG457252 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD61828 Cal ID: ICP-TH-24-DEC-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	5.96	95.3	85 - 115	
Calcium, Total	6.25	6.68	107	85 - 115	
Iron, Total	2.50	2.31	92.5	85 - 115	
Magnesium, Total	6.25	5.65	90.4	85 - 115	
Potassium, Total	31.3	28.4	90.8	85 - 115	
Sodium, Total	31.3	28.3	90.5	85 - 115	
Strontium, Total	0.625	0.564	90.3	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3280037
Report generated: 12/30/2013 16:21

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13120753 Cal ID: ICP-THERMO2- 20-DEC-13 Worknum:WG457227

Instrument ID:ICP-THERMO2 Contract #: Prep Method:3015

Parent ID:L13120753-03 File ID:T2.122013.193009 Dil:1 Method:6010B

Sample ID:L13120753-04 MS File ID:T2.122013.193341 Dil:1 Matrix:Water

Sample ID:L13120753-05 MSD File ID:T2.122013.193659 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.360	6.25	6.33	95.6	6.25	6.33	95.5	0.0967	80 - 120	20	
Calcium, Total	12.8	6.25	18.4	89.2	6.25	18.1	83.7	1.87	80 - 120	20	
Iron, Total	0.202	2.50	2.60	96.1	2.50	2.60	95.7	0.346	80 - 120	20	
Potassium, Total	3.31	31.3	34.3	99.3	31.3	34.0	98.3	0.892	80 - 120	20	
Sodium, Total	109	31.3	136	86.7	31.3	136	86.7	0.0091	80 - 120	20	
Strontium, Total	0.441	0.625	1.05	98	0.625	1.05	97.3	0.390	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3280544

Report generated 12/30/2013 16:26

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13120753 Cal ID: ICP-THERMO2- 30-DEC-13 Worknum:WG457227

Instrument ID:ICP-THERMO2 Contract #: Prep Method:3015

Parent ID:L13120753-03 File ID:T2.123013.134748 Dil:1 Method:6010B

Sample ID:L13120753-04 MS File ID:T2.123013.135120 Dil:1 Matrix:Water

Sample ID:L13120753-05 MSD File ID:T2.123013.140135 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Magnesium, Total	7.20	6.25	12.6	86.8	6.25	12.6	85.8	0.506	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3280544

Report generated 12/30/2013 16:26

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13120753 Cal ID: ICP-THERMO2- 24-DEC-13 Worknum:WG457252

Instrument ID:ICP-THERMO2 Contract #: Prep Method:3015

Parent ID:L13120753-31 File ID:T2.122413.220620 Dil:1 Method:6010B

Sample ID:L13120753-32 MS File ID:T2.122413.220951 Dil:1 Matrix:Water

Sample ID:L13120753-33 MSD File ID:T2.122413.222008 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	5.93	94.9	6.25	5.90	94.4	0.534	80 - 120	20	
Calcium, Total	13.5	6.25	19.6	97.9	6.25	20.5	112	4.54	80 - 120	20	
Iron, Total	0.0841	2.50	2.37	91.4	2.50	2.37	91.6	0.163	80 - 120	20	
Magnesium, Total	6.05	6.25	11.4	85.3	6.25	12.0	95.6	5.48	80 - 120	20	
Potassium, Total	0.817	31.3	29.4	91.5	31.3	29.3	91.3	0.238	80 - 120	20	
Sodium, Total	77.7	31.3	102	79.2	31.3	109	102	6.61	80 - 120	20	*
Strontium, Total	0.385	0.625	0.939	88.6	0.625	0.975	94.5	3.82	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3280544

Report generated 12/30/2013 16:26

Microbac Laboratories Inc.
MS REPORT

Loginnum:L13120753 Cal ID:ICP-THERMO - 20-DEC-13 Worknum:WG457227
Instrument ID:ICP-THERMO Contract #: Method:6010B
Parent ID:L13120753-03 File ID:T2.122013.193009 Dil: 1 Matrix:Water
Sample ID:L13120753-04 MS File ID:T2.122013.193341 Dil: 1 Units:mg/L
Sample ID:L13120753-05 MSD File ID:T2.122013.193659 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec
Aluminum, Total	0.360	6.25	6.33	95.5
Calcium, Total	12.8	6.25	18.4	89.6
Iron, Total	0.202	2.50	2.60	95.9
Magnesium, Total	7.91	6.25	13.7	92.6
Potassium, Total	3.31	31.3	34.3	99.0
Sodium, Total	109	31.3	136	86.3
Strontium, Total	0.441	0.625	1.05	97.4

* EXCEEDS %REC LIMIT

EXCEEDS RPD LIMIT

SAMPLE_MS - Modified 06/27/2008
PDF File ID: 3280038
Report generated: 12/23/2013 07:54

Microbac Laboratories Inc.
MS REPORT

Loginnum: L13120753 Cal ID: ICP-THERMO 20-DEC-13 Worknum: WG457227
Instrument ID: ICP-THERMO Contract #: Method: 6010B
Parent ID: L13120753-03 File ID: T2.122013.193009 Dil: 1 Matrix: Water
Sample ID: L13120753-04 MS File ID: T2.122013.193341 Dil: 1 Units: mg/L
Sample ID: L13120753-05 MSD File ID: T2.122013.193659 Dil: 1

Analyte	Parent	MSD Spiked	MSD Found	MSD %Rec	%Rec Limits	Q
Aluminum, Total		6.25	6.33	95.5	80 - 120	
Calcium, Total		6.25	18.1	84.8	80 - 120	
Iron, Total		2.50	2.60	95.9	80 - 120	
Magnesium, Total		6.25	13.8	94.2	80 - 120	
Potassium, Total		31.3	34.0	98.1	80 - 120	
Sodium, Total		31.3	136	86.3	80 - 120	
Strontium, Total		0.625	1.05	97.4	80 - 120	

* EXCEEDS %REC LIMIT

EXCEEDS RPD LIMIT

SAMPLE_MS - Modified 06/27/2008
PDF File ID: 3280038
Report generated: 12/23/2013 07:54

METHOD BLANK SUMMARY

Login Number: L13120753
Work Group: WG456830
Blank File ID: NI.121813.114146
Blank Sample ID: WG456790-04
Prep Date: 12/18/13 08:28
Instrument ID: ICP-MS2
Analyzed Date: 12/18/13 11:41
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG456790-05	NI.121813.114450	12/18/13 11:44	01
35B WW09	L13120753-01	NI.121813.125549	12/18/13 12:55	01
35B WW08	L13120753-02	NI.121813.125854	12/18/13 12:58	01
MW1-1	L13120753-03	NI.121813.130158	12/18/13 13:01	01
MW1-1	L13120753-04	NI.121813.130503	12/18/13 13:05	01
MW1-1	L13120753-05	NI.121813.130808	12/18/13 13:08	01
DUP	WG456790-08	NI.121813.131545	12/18/13 13:15	01

Report Name: BLANK_SUMMARY
PDF File ID: 3272303
Report generated 12/20/2013 13:49

METHOD BLANK SUMMARY

Login Number: L13120753
Work Group: WG457079
Blank File ID: NI.121913.145309
Blank Sample ID: WG457022-03
Prep Date: 12/19/13 11:27
Instrument ID: ICP-MS2
Analyzed Date: 12/19/13 14:53
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG457022-04	NI.121913.145614	12/19/13 14:56	01
MW1-2	L13120753-07	NI.121913.153011	12/19/13 15:30	01
FIELD BLANK 4DEC2013	L13120753-08	NI.121913.153316	12/19/13 15:33	01
35BWW10	L13120753-09	NI.121913.153621	12/19/13 15:36	01
MW2-1	L13120753-10	NI.121913.153925	12/19/13 15:39	01
MW2-2	L13120753-11	NI.121913.154230	12/19/13 15:42	01
MW2-3	L13120753-12	NI.121913.154536	12/19/13 15:45	01
MW3-1	L13120753-13	NI.121913.154841	12/19/13 15:48	01
MW2-2	L13120753-11	NI.121913.155202	12/19/13 15:52	DL01
DUP	WG457022-07	NI.121913.161034	12/19/13 16:10	01

Report Name: BLANK_SUMMARY
PDF File ID: 3272303
Report generated 12/20/2013 13:49

METHOD BLANK SUMMARY

Login Number: L13120753
Blank File ID: NI.122013.110920
Prep Date: 12/20/13 09:05
Analyzed Date: 12/20/13 11:09
Analyst: JYH

Work Group: WG457194
Blank Sample ID: WG457157-02
Instrument ID: ICP-MS2
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG457157-03	NI.122013.111225	12/20/13 11:12	01
35B WW14	L13120753-31	NI.122013.111529	12/20/13 11:15	01
35B WW14 MS	L13120753-32	NI.122013.111834	12/20/13 11:18	01
35B WW14 MSD	L13120753-33	NI.122013.112426	12/20/13 11:24	01
MW3-2	L13120753-15	NI.122013.112731	12/20/13 11:27	01
MW3-2D	L13120753-16	NI.122013.113036	12/20/13 11:30	01
MW3-3	L13120753-17	NI.122013.115824	12/20/13 11:58	01
MW-58	L13120753-19	NI.122013.120128	12/20/13 12:01	01
35B WW03	L13120753-20	NI.122013.120433	12/20/13 12:04	01
35B WW20	L13120753-21	NI.122013.120738	12/20/13 12:07	01
35B WW04	L13120753-22	NI.122013.121042	12/20/13 12:10	01
FIELD BLANK 9DEC 2013	L13120753-23	NI.122013.121347	12/20/13 12:13	01
35B WW12	L13120753-24	NI.122013.121652	12/20/13 12:16	01
35B WW05	L13120753-25	NI.122013.122701	12/20/13 12:27	01
35B WW06	L13120753-26	NI.122013.123006	12/20/13 12:30	01
MW 4-1	L13120753-27	NI.122013.123311	12/20/13 12:33	01
MW 4-1D	L13120753-28	NI.122013.123616	12/20/13 12:36	01
MW 4-2	L13120753-30	NI.122013.123920	12/20/13 12:39	01
35B WW17	L13120753-34	NI.122013.124225	12/20/13 12:42	01
35B WW20	L13120753-21	NI.122013.124530	12/20/13 12:45	DL01
35B WW06	L13120753-26	NI.122013.125436	12/20/13 12:54	DL01
MW 4-1	L13120753-27	NI.122013.125740	12/20/13 12:57	DL01
MW 4-1D	L13120753-28	NI.122013.130045	12/20/13 13:00	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3272303
Report generated 12/20/2013 13:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13120753 Prep Date:12/18/13 08:28 Sample ID:WG456790-04
Instrument ID:ICP-MS2 Run Date:12/18/13 11:41 Prep Method:3015
File ID:NI.121813.114146 Analyst:JYH Method:6020
Workgroup (AAB#):WG456830 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-MS-18-DEC-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3272304
20-DEC-2013 13:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13120753 Prep Date:12/19/13 11:27 Sample ID:WG457022-03
Instrument ID:ICP-MS2 Run Date:12/19/13 14:53 Prep Method:3015
File ID:NI.121913.145309 Analyst:JYH Method:6020
Workgroup (AAB#):WG457079 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-MS-19-DEC-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3272304
20-DEC-2013 13:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L13120753 Prep Date:12/20/13 09:05 Sample ID:WG457157-02
Instrument ID:ICP-MS2 Run Date:12/20/13 11:09 Prep Method:3015
File ID:NI.122013.110920 Analyst:JYH Method:6020
Workgroup (AAB#):WG457194 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-MS-20-DEC-13

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3272304
20-DEC-2013 13:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/18/2013 Sample ID: WG456790-05
Instrument ID: ICP-MS2 Run Time: 11:44 Prep Method: 3015
File ID: NI.121813.114450 Analyst: JYH Method: 6020
Workgroup (AAB#): WG456830 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD60087 Cal ID: ICP-MS-18-DEC-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0621	99.4	80 - 120	
Barium, Total	0.0625	0.0617	98.7	80 - 120	
Cadmium, Total	0.0625	0.0624	99.8	80 - 120	
Chromium, Total	0.0625	0.0627	100	80 - 120	
Copper, Total	0.0625	0.0647	103	80 - 120	
Lead, Total	0.0625	0.0626	100	80 - 120	
Manganese, Total	0.0625	0.0643	103	80 - 120	
Nickel, Total	0.0625	0.0645	103	80 - 120	
Selenium, Total	0.0625	0.0617	98.7	80 - 120	
Thallium, Total	0.0625	0.0625	99.9	80 - 120	
Vanadium, Total	0.0625	0.0636	102	80 - 120	
Zinc, Total	0.0625	0.0656	105	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3272305
Report generated: 12/20/2013 13:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/19/2013 Sample ID: WG457022-04
Instrument ID: ICP-MS2 Run Time: 14:56 Prep Method: 3015
File ID: NI.121913.145614 Analyst: JYH Method: 6020
Workgroup (AAB#): WG457079 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD60087 Cal ID: ICP-MS-19-DEC-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0624	99.9	80 - 120	
Barium, Total	0.0625	0.0633	101	80 - 120	
Cadmium, Total	0.0625	0.0625	100	80 - 120	
Chromium, Total	0.0625	0.0672	107	80 - 120	
Copper, Total	0.0625	0.0645	103	80 - 120	
Lead, Total	0.0625	0.0640	102	80 - 120	
Manganese, Total	0.0625	0.0673	108	80 - 120	
Nickel, Total	0.0625	0.0644	103	80 - 120	
Selenium, Total	0.0625	0.0622	99.5	80 - 120	
Thallium, Total	0.0625	0.0649	104	80 - 120	
Vanadium, Total	0.0625	0.0668	107	80 - 120	
Zinc, Total	0.0625	0.0653	105	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3272305
Report generated: 12/20/2013 13:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13120753 Run Date: 12/20/2013 Sample ID: WG457157-03
Instrument ID: ICP-MS2 Run Time: 11:12 Prep Method: 3015
File ID: NI.122013.111225 Analyst: JYH Method: 6020
Workgroup (AAB#): WG457194 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD60087 Cal ID: ICP-MS-20-DEC-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0666	107	80 - 120	
Barium, Total	0.0625	0.0652	104	80 - 120	
Cadmium, Total	0.0625	0.0649	104	80 - 120	
Chromium, Total	0.0625	0.0665	106	80 - 120	
Copper, Total	0.0625	0.0688	110	80 - 120	
Lead, Total	0.0625	0.0665	106	80 - 120	
Manganese, Total	0.0625	0.0677	108	80 - 120	
Nickel, Total	0.0625	0.0664	106	80 - 120	
Selenium, Total	0.0625	0.0651	104	80 - 120	
Thallium, Total	0.0625	0.0667	107	80 - 120	
Vanadium, Total	0.0625	0.0667	107	80 - 120	
Zinc, Total	0.0625	0.0713	114	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3272305
Report generated: 12/20/2013 13:49

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13120753 Cal ID: ICP-MS2- 18-DEC-13 Worknum:WG456830

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13120753-03 File ID:NI.121813.130158 Dil:1 Method:6020

Sample ID:L13120753-04 MS File ID:NI.121813.130503 Dil:1 Matrix:Water

Sample ID:L13120753-05 MSD File ID:NI.121813.130808 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0628	101	0.0625	0.0641	103	1.99	75 - 125	20	
Barium, Total	0.0598	0.0625	0.119	95.1	0.0625	0.122	99.2	2.13	75 - 125	20	
Cadmium, Total	0.000314	0.0625	0.0623	99.1	0.0625	0.0633	101	1.59	75 - 125	20	
Chromium, Total	0.00982	0.0625	0.0716	98.8	0.0625	0.0721	99.7	0.750	75 - 125	20	
Copper, Total	0.00277	0.0625	0.0638	97.6	0.0625	0.0652	100	2.27	75 - 125	20	
Lead, Total	ND	0.0625	0.0623	99.7	0.0625	0.0629	101	0.968	75 - 125	20	
Manganese, Total	0.00481	0.0625	0.0659	97.7	0.0625	0.0676	100	2.52	75 - 125	20	
Nickel, Total	ND	0.0625	0.0630	101	0.0625	0.0644	103	2.10	75 - 125	20	
Selenium, Total	0.0113	0.0625	0.0742	101	0.0625	0.0750	102	1.10	75 - 125	20	
Thallium, Total	ND	0.0625	0.0623	99.7	0.0625	0.0626	100	0.524	75 - 125	20	
Vanadium, Total	0.00352	0.0625	0.0661	100	0.0625	0.0660	100	0.169	75 - 125	20	
Zinc, Total	0.0158	0.0625	0.0695	85.8	0.0625	0.0714	89	2.79	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 3272306
Report generated 12/20/2013 13:49

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L13120753 Cal ID: ICP-MS2- 20-DEC-13 Worknum:WG457194

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L13120753-31 File ID:NI.122013.111529 Dil:1 Method:6020

Sample ID:L13120753-32 MS File ID:NI.122013.111834 Dil:1 Matrix:Water

Sample ID:L13120753-33 MSD File ID:NI.122013.112426 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0657	105	0.0625	0.0680	109	3.33	75 - 125	20	
Barium, Total	0.0467	0.0625	0.107	96.8	0.0625	0.112	104	4.25	75 - 125	20	
Cadmium, Total	ND	0.0625	0.0632	101	0.0625	0.0651	104	2.98	75 - 125	20	
Chromium, Total	ND	0.0625	0.0608	97.3	0.0625	0.0634	102	4.26	75 - 125	20	
Copper, Total	ND	0.0625	0.0632	101	0.0625	0.0664	106	4.93	75 - 125	20	
Lead, Total	ND	0.0625	0.0637	102	0.0625	0.0665	106	4.40	75 - 125	20	
Manganese, Total	0.0262	0.0625	0.0862	96	0.0625	0.0924	106	6.89	75 - 125	20	
Nickel, Total	ND	0.0625	0.0635	102	0.0625	0.0661	106	3.99	75 - 125	20	
Selenium, Total	0.00128	0.0625	0.0626	98.1	0.0625	0.0657	103	4.89	75 - 125	20	
Thallium, Total	ND	0.0625	0.0637	102	0.0625	0.0667	107	4.58	75 - 125	20	
Vanadium, Total	ND	0.0625	0.0619	99	0.0625	0.0649	104	4.85	75 - 125	20	
Zinc, Total	ND	0.0625	0.0673	108	0.0625	0.0707	113	5.03	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3272306

Report generated 12/20/2013 13:49

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L13120753 Cal ID: ICP-MS2- Worknum: WG457079
Instrument ID: ICP-MS2 Contract #: Method: 6020
Parent ID: WG457022-01 File ID: NI.121913.145919 Dil: 1 Matrix: WATER
Sample ID: WG457022-05 MS File ID: NI.121913.150224 Dil: 1 Units: mg/L
Sample ID: WG457022-06 MSD File ID: NI.121913.150528 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony	ND	0.0625	0.0621	99.3	0.0625	0.0634	101	2.14	75 - 125	20	
Barium	0.0153	0.0625	0.0770	98.8	0.0625	0.0780	100	1.23	75 - 125	20	
Cadmium	ND	0.0625	0.0625	100	0.0625	0.0628	101	0.485	75 - 125	20	
Chromium	ND	0.0625	0.0664	106	0.0625	0.0681	109	2.54	75 - 125	20	
Copper	ND	0.0625	0.0646	103	0.0625	0.0653	105	1.13	75 - 125	20	
Lead	ND	0.0625	0.0631	101	0.0625	0.0638	102	1.17	75 - 125	20	
Manganese	0.0202	0.0625	0.0862	106	0.0625	0.0875	108	1.49	75 - 125	20	
Nickel	ND	0.0625	0.0645	103	0.0625	0.0649	104	0.567	75 - 125	20	
Selenium	ND	0.0625	0.0619	99.1	0.0625	0.0625	100	0.906	75 - 125	20	
Thallium	ND	0.0625	0.0640	102	0.0625	0.0645	103	0.773	75 - 125	20	
Vanadium	0.000743	0.0625	0.0655	104	0.0625	0.0670	106	2.26	75 - 125	20	
Zinc	ND	0.0625	0.0679	109	0.0625	0.0678	108	0.215	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3279018
Report generated 12/20/2013 15:40

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
December 31, 2013

001 - BIO-CHEM TESTING WVDEP 220	002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental	004 - MICROBAC PITTSBURGH
005 - ES LABORATORIES	ADC - ANTHONY D. CANTER
ADG - APRIL D. GREENE	AJF - AMANDA J. FICKIESEN
AML - TONY M. LONG	AZH - AFTER HOURS
BAF - BRICE A. FENTON	BJO - BRIAN J. OGDEN
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN	CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS	CRW - CHRISTINA R. WILSON
CSH - CHRIS S. HILL	CTB - CHRIS T. BUCINA
DAK - DEAN A. K	DCM - DAVID C. MERCKLE
DDE - DEBRA D. ELLIOTT	DEV - DAVID E. VANDENBERG
DIH - DEANNA I. HESSON	DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON
EDL - ERIN D. LONG	ENY - EMILY N. YOAK
EPT - ETHAN P. TIDD	ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN	HCB - HEIDI C. BROWN
HJR - HOLLY J. REED	JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON	JKS - JANE K. SCHAAD
JLL - JOHN L. LENT	JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES	JYH - JI Y. HU
KDW - KATHRYN D. WELCH	KEB - KATIE E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON
KRB - KAELY R. BECKER	KSC - KELLY S. CUNNINGHAM
LKN - LINDA K. NEDEFF	LLS - LARRY L. STEPHENS
LSB - LESLIE S. BUCINA	MBK - MORGAN B. KNOWLTON
MDA - MIKE D. ALBERTSON	MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING	MLW - MATTHEW L. WARREN
MMB - MAREN M. BEERY	MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE	PSW - PEGGY S. WEBB
QX - QIN XU	RAH - ROY A. HALSTEAD
REK - BOB E. KYER	RLB - BOB BUCHANAN
RM - RAYMOND MALEKE	RNP - RICK N. PETTY
RS - ROSEMARY SCOTT	RWC - RODNEY W. CAMPBELL
SAV - SARAH A. VANDENBERG	SEP - SUZANNE J. PAUGH
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF
TLC - TYLER L. CORDELL	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	TPA - TYLER P. AMRINE
VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG	XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
December 31, 2013

Qualkey: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
CT1	The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated value; the analyte concentration was less than the RL/LOQ.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL/MDL).
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, H1	Not detected; Sample analysis performed past holding time.
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 30957

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: USARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: CHAAP

Project ID: 3083.001 / B66490

Sampler (print): CARL JOHNSON JR | Signature:

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)
35B WW09		X	4Dec2013	0900	GW	4	S	3	1	
35B WW08		X	↓	1015	GW	4	S	3	1	
MW1-1		X	↓	1110	GW	4	S	3	1	
MW1-1 MS		X		1115	GW	4	S	3	1	
MW1-1 MSD		X	↓	1120	GW	4	S	3	1	
TRIPBLANK 4Dec2013		X	4Dec2013	—	TRIP BLANK	2	S	2	0	
MW1-2		X	4Dec2013	1430	GW	4	S	3	1	
FIELDBLANK 4Dec2013		X	4Dec2013	1420	DI WATER	4	S	3	1	
35B WW10		X	4Dec2013	1602	GW	4	S	3	1	
MW2-1		X	4Dec2013	1700	GW	4	S	3	1	
MW2-2		X	5Dec2013	0920	GW	4	S	3	1	
MW2-3		X	5Dec2013	1045	GW	4	S	3	1	
MW3-1		X	5Dec2013	1300	GW	4	S	3	1	
TRIPBLANK 5Dec2013		X	5Dec2013	—	GW	2	S	2	0	
MW3-2		X	6Dec2013	0915	GW	4	S	3	1	
MW3-2D		X	6Dec2013	0930	GW	4	S	3	1	
MW3-3		X	6Dec2013	1100	GW	4	S	3	1	
TRIPBLANK 6Dec2013		X	6Dec2013	—	GW	2	S	2	0	
MW-58		X	6Dec2013	1300	GW	4	S	3	1	
35B WW03		X	6Dec2013	1430	GW	4	S	3	1	

Microbac OVD
Received: 12/12/2013 10:44
By: BRIAN OGDEN
221000046753

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
	12-11-2013	1000					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

COC No. A 37725

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 30883.001 / B66490

Sampler (print): CARL JOHNSON JR | Signature: Carl Johnson Jr

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
35B WW 20		X	9 Dec 2013	0845	GW	4	S	3	1		
35B WW04		X	9 Dec 2013	1000	GW	4	S	3	1		
Field Blank 9 Dec 2013		X	9 Dec 2013	0930	DI WATER	4	S	3	1		
35B WW 17		X	9 Dec 2013	1115	GW	4	S	3	1		
35B WW 05		X	9 Dec 2013	1320	GW	4	S	3	1		
35B WW 06		X	9 Dec 2013	1430	GW	4	S	3	1		
MW 4-1		X	10 Dec 2013	0900	GW	4	S	3	1		
MW 4-1 D		X	10 Dec 2013	0915	GW	4	S	3	1		
TRIP Blank 10 Dec 2013		X	10 Dec 2013	-	-	2	S	2			
MW 4-2		X	10 Dec 2013	1030	GW	4	S	3	1		
35B WW 14		X	10 Dec 2013	1240	GW	4	S	3	1		
35B WW 14MS		X	10 Dec 2013	1250	GW	4	S	3	1		
35B WW 14MSD		X	10 Dec 2013	1300	GW	4	S	3	1		
35B WW 19		X	10 Dec 2013	1400	GW	4	S	3	1		

Microbac OVD
Received: 12/12/2013 10:44
By: BRIAN OGDEN
221000046753

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Carl Johnson Jr	12-11-2013	1000	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00838563

NELAP Addendum - November 13, 2013

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Nitroguanidine
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL KNITRO-C-WUV-VIS

Nitrocellulose

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL HPLCOS-HPLC-UV

Nitroguanidine

OVL KNITRO-C-S/UV-VIS

Nitrocellulose

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L14031100

Gene Fabian
Aberdeen Test Center
US Army Aberdeen Center
Aberdeen Proving Ground, MD 21005

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Kathy Albertson – Team Chemist/Data Specialist
(740) 373-4071
Kathy.Albertson@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on April 03 2014

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: Microbac OVD

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00110267	I	0.0		1015923862860004575000798268323076	X
00110252	I	0.0		1015923862860004575000798268323098	X
0019117	I	1.0		1002239562860004575000804334336264	X
0019118	I	2.0		1015923862860004575000798268323087	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35BWW08	L14031100-01	03/11/2014 10:50	03/20/2014 10:41
MW 1-1	L14031100-02	03/11/2014 11:50	03/20/2014 10:41
MW 1-2	L14031100-03	03/11/2014 14:30	03/20/2014 10:41
FIELD BLANK 11 MARCH 2014	L14031100-04	03/11/2014 13:00	03/20/2014 10:41
MW 1-3	L14031100-05	03/11/2014 15:30	03/20/2014 10:41
35B WW10	L14031100-06	03/12/2014 09:15	03/20/2014 10:41
MW 2-1	L14031100-07	03/12/2014 11:20	03/20/2014 10:41
MW 2-1D	L14031100-08	03/12/2014 11:30	03/20/2014 10:41
TRIP BLANK 12 MARCH 2014	L14031100-09	03/12/2014 00:01	03/20/2014 10:41
MW 2-2	L14031100-10	03/12/2014 13:30	03/20/2014 10:41
MW 2-3	L14031100-11	03/12/2014 15:00	03/20/2014 10:41
35B WW09	L14031100-12	03/13/2014 09:00	03/20/2014 10:41
35B WW09 MS	L14031100-13	03/13/2014 09:10	03/20/2014 10:41
35B WW09 MSD	L14031100-14	03/13/2014 09:20	03/20/2014 10:41
MW 3-1	L14031100-15	03/13/2014 12:15	03/20/2014 10:41
MW 3-2	L14031100-16	03/13/2014 15:15	03/20/2014 10:41
TRIP BLANK 13 MARCH 2014	L14031100-17	03/13/2014 00:01	03/20/2014 10:41
TRIP BLANK 14 MARCH 2014	L14031100-18	03/14/2014 00:01	03/20/2014 10:41
MW 3-3	L14031100-19	03/14/2014 09:10	03/20/2014 10:41
35B WW04	L14031100-20	03/14/2014 10:10	03/20/2014 10:41
MW 58	L14031100-21	03/14/2014 11:10	03/20/2014 10:41
35B WW03	L14031100-22	03/14/2014 13:10	03/20/2014 10:41
MW 4-1	L14031100-23	03/17/2014 09:30	03/20/2014 10:41
TRIP BLANK 17 MARCH 2014	L14031100-24	03/17/2014 00:01	03/20/2014 10:41
SW-2	L14031100-25	03/17/2014 08:45	03/20/2014 10:41
SW-1	L14031100-26	03/17/2014 09:00	03/20/2014 10:41
MW 4-2	L14031100-27	03/17/2014 11:15	03/20/2014 10:41
MW 4-3	L14031100-28	03/17/2014 13:00	03/20/2014 10:41
35BWW17	L14031100-29	03/17/2014 14:15	03/20/2014 10:41
35BWW17 MS	L14031100-30	03/17/2014 14:30	03/20/2014 10:41
35BWW17 MSD	L14031100-31	03/17/2014 14:45	03/20/2014 10:41
35BWW05	L14031100-32	03/18/2014 09:15	03/20/2014 10:41
35BWW05D	L14031100-33	03/18/2014 09:30	03/20/2014 10:41
FIELD BLANK 18 MARCH 2014	L14031100-34	03/18/2014 08:30	03/20/2014 10:41
35BWW06	L14031100-35	03/18/2014 10:50	03/20/2014 10:41

Microbac Laboratories
Case Narrative

Login Number: L14031100
Department: Volatiles
Analyst: Anthony Canter

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: Recoveries out of range were observed for the following analytes: 2-chloroethyl vinyl ether, dichlorodifluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: Analytes were detected above the applicable reporting limit for the following analytes: p-bromofluorobenzene. Please see the applicable QC report for a detailed presentation of the failures.

Laboratory Control Sample: Recoveries out of range were observed for the following analytes: dichlorodifluoromethane, 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, 1,2,4-trimethylbenzene, 1,2-dibromo-3-chloropropane, 1,3,5-trimethylbenzene, 2-hexanone, bromobenzene, p-bromofluorobenzene. Please see the applicable QC report for a detailed presentation of the failures. Outliers in the LCS performed 03/21/14 on HPMS17 were ND above the RL in the associated analyses.

Matrix Spikes: Recoveries out of range were observed for the following analytes: 2-chloroethyl vinyl ether, chloromethane, dichlorodifluoromethane, trans-1,3-dichloropropene, trichloroethene, 1,1,2,2-tetrachloroethane, 1,3-dichloropropane. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: Recoveries out of range were observed for the following analytes: toluene-d8, 4-bromofluorobenzene. Please see the applicable QC report for a detailed presentation of the failures.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 80304
Approved By: Michael Albertson

Microbac Laboratories
Case Narrative

Login Number: L14031100
Department: Metals
Analyst: Pierce Morris

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG469156 - All acceptance criteria were met.

WG469157 - All acceptance criteria were met.

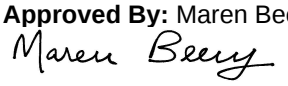
Matrix Spikes: WG468156 - Sample 12 was chosen by the client for MS/MSD analysis. Samples 13(MS) and 14(MSD) met all acceptance criteria.

WG469157 - Sample 29 was chosen by the client for MS/MSD analysis. Samples 30(MS) and 31(MSD) yielded noncompliant recoveries for two analytes.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 80506
Approved By: Maren Beery



Microbac Laboratories
Case Narrative

Login Number: L14031100
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: WG469179 - Due to continuing calibration verification failure for chromium on 31-Mar-2014 at 11:22, client samples 03 through 08 and 15 were reanalyzed later in the analytical sequence for chromium. Samples 10, 11 and 16 were reanalyzed for chromium on a later calibration.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG469179 - All acceptance criteria were met.

WG469181 - All acceptance criteria were met.

Matrix Spikes: WG469179 - Sample 12 was chosen by the client for MS/MSD analysis. Samples 13(MS) and 14(MSD) met all acceptance criteria.

WG469181 - Sample 29 was chosen by the client for MS/MSD analysis. Samples 30(MS) and 31(MSD) yielded noncompliant recoveries for two analytes and a noncompliant RPD for one analyte.

SAMPLES

Samples: WG469179 - Client sample 10 required a dilution analysis in order to obtain a result for barium within the linear range. Client sample 23 required a dilution analysis in order to obtain a result for manganese within the linear range.

Narrative ID: 80489
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW08	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 19:22
Collect Date:	03/11/2014 10:50	**Dilution:**	1	**File ID:**	8M395812
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	31.0		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.8	86	118	
1,2-Dichloroethane-d4	93.1	80	120	
Toluene-d8	92.1	88	110	
4-Bromofluorobenzene	95.6	86	115	

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	35BWW08	**Prep Method:**	3015	**Prep Date:**	03/27/2014 12:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/31/2014 10:10
Workgroup #:	WG469156	**Analyst:**	PDM	**Run Date:**	03/31/2014 10:44
Collect Date:	03/11/2014 10:50	**Dilution:**	1	**File ID:**	T1.033114.104443
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	23.4		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	13.0		0.500	0.250
Potassium, Total	7440-09-7	1.59		1.00	0.500
Sodium, Total	7440-23-5	117		0.500	0.250
Strontium, Total	7440-24-6	0.794		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW08	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 10:28
Collect Date:	03/11/2014 10:50	**Dilution:**	1	**File ID:**	NI.033114.102828
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0462		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000315	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00398		0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0121		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0594		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00101		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 1-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 14:26
Collect Date:	03/11/2014 11:50	**Dilution:**	1	**File ID:**	8M395802
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.82		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.1	86	118	
1,2-Dichloroethane-d4	89.1	80	120	
Toluene-d8	90.7	88	110	
4-Bromofluorobenzene	95.2	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MW 1-1	**Prep Method:**	3015	**Prep Date:**	03/27/2014 12:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/31/2014 10:10
Workgroup #:	WG469156	**Analyst:**	PDM	**Run Date:**	03/31/2014 10:55
Collect Date:	03/11/2014 11:50	**Dilution:**	1	**File ID:**	T1.033114.105554
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	10.4		0.500	0.250
Iron, Total	7439-89-6	0.0511	J	0.100	0.0500
Magnesium, Total	7439-95-4	5.81		0.500	0.250
Potassium, Total	7440-09-7	0.977	J	1.00	0.500
Sodium, Total	7440-23-5	89.1		0.500	0.250
Strontium, Total	7440-24-6	0.336		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 1-1	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 10:31
Collect Date:	03/11/2014 11:50	**Dilution:**	1	**File ID:**	NI.033114.103136
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0511		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000432	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00121	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00243		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00685		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0240		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00133		0.00100	0.000500
Zinc, Total	7440-66-6	0.0130	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 1-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 14:55
Collect Date:	03/11/2014 14:30	**Dilution:**	1	**File ID:**	8M395803
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	2.65	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	90.1	86	118	
1,2-Dichloroethane-d4	86.8	80	120	
Toluene-d8	93.7	88	110	
4-Bromofluorobenzene	95.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-03 **PrePrep Method:** N/A **Instrument:** ICP-THERMO1
Client ID: MW 1-2 **Prep Method:** 3015 **Prep Date:** 03/27/2014 12:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/31/2014 10:10
Workgroup #: WG469156 **Analyst:** PDM **Run Date:** 03/31/2014 10:59
Collect Date: 03/11/2014 14:30 **Dilution:** 1 **File ID:** T1.033114.105942
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.156	J	0.200	0.100
Calcium, Total	7440-70-2	22.0		0.500	0.250
Iron, Total	7439-89-6	0.0797	J	0.100	0.0500
Magnesium, Total	7439-95-4	1.74		0.500	0.250
Potassium, Total	7440-09-7	3.07		1.00	0.500
Sodium, Total	7440-23-5	94.1		0.500	0.250
Strontium, Total	7440-24-6	2.26		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14031100-03 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 1-2 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 12:51
Collect Date: 03/11/2014 14:30 **Dilution:** 1 **File ID:** NI.033114.125101
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3	0.00448		0.00200	0.00100

Sample #: L14031100-03 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 1-2 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 10:51
Collect Date: 03/11/2014 14:30 **Dilution:** 1 **File ID:** NI.033114.105134
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.107		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000341	J	0.000600	0.000300
Copper, Total	7440-50-8	0.00653		0.00200	0.00100

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Lead, Total	7439-92-1	0.000500	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00165	J	0.00200	0.00100
Nickel, Total	7440-02-0	0.00535		0.00400	0.00200
Selenium, Total	7782-49-2	0.00531		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00992		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-04
Client ID: FIELD BLANK 11 MARCH 2014
Matrix: Water
Workgroup #: WG468027
Collect Date: 03/11/2014 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/21/2014 12:27
File ID: 8M395798

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.239	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.8	86	118	
1,2-Dichloroethane-d4	87.9	80	120	
Toluene-d8	92.0	88	110	
4-Bromofluorobenzene	96.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-04
Client ID: FIELD BLANK 11 MARCH 2014
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/11/2014 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 11:05
File ID: T1.033114.110526

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-04
Client ID: FIELD BLANK 11 MARCH 2014
Matrix: Water
Workgroup #: WG469179
Collect Date: 03/11/2014 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/28/2014 07:24
Cal Date: 03/31/2014 09:47
Run Date: 03/31/2014 10:54
File ID: NI.033114.105442

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00126	J	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-04
Client ID: FIELD BLANK 11 MARCH 2014
Matrix: Water
Workgroup #: WG469179
Collect Date: 03/11/2014 13:00
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/28/2014 07:24
Cal Date: 03/31/2014 09:47
Run Date: 03/31/2014 12:54
File ID: NI.033114.125408

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3		ND	0.00200	0.00100

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-05
Client ID: MW 1-3
Matrix: Water
Workgroup #: WG468027
Collect Date: 03/11/2014 15:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/21/2014 15:24
File ID: 8M395804

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	5.35	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.426	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.2	86	118	
1,2-Dichloroethane-d4	89.5	80	120	
Toluene-d8	91.3	88	110	
4-Bromofluorobenzene	95.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-05
Client ID: MW 1-3
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/11/2014 15:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 11:09
File ID: T1.033114.110914

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.47		0.200	0.100
Calcium, Total	7440-70-2	8.04		0.500	0.250
Iron, Total	7439-89-6	7.02		0.100	0.0500

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Magnesium, Total	7439-95-4	4.30		0.500	0.250
Potassium, Total	7440-09-7	2.30		1.00	0.500
Sodium, Total	7440-23-5	84.5		0.500	0.250
Strontium, Total	7440-24-6	0.380		0.0500	0.0250

Sample #: L14031100-05 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 1-3 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 12:57
Collect Date: 03/11/2014 15:30 **Dilution:** 1 **File ID:** NI.033114.125716
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3	0.0209		0.00200	0.00100

Sample #: L14031100-05 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 1-3 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 10:57
Collect Date: 03/11/2014 15:30 **Dilution:** 1 **File ID:** NI.033114.105750
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.112		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000309	J	0.000600	0.000300
Copper, Total	7440-50-8	0.00855		0.00200	0.00100
Lead, Total	7439-92-1	0.00505		0.00100	0.000500
Manganese, Total	7439-96-5	0.0533		0.00200	0.00100
Nickel, Total	7440-02-0	0.0107		0.00400	0.00200
Selenium, Total	7782-49-2	0.0307		0.00100	0.000500
Thallium, Total	7440-28-0	0.000108	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0154		0.00100	0.000500
Zinc, Total	7440-66-6	0.0467		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-06	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35B WW10	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 19:51
Collect Date:	03/12/2014 09:15	**Dilution:**	1	**File ID:**	8M395813
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.49		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	37.2		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.8	86	118	
1,2-Dichloroethane-d4	92.1	80	120	
Toluene-d8	91.6	88	110	
4-Bromofluorobenzene	94.3	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	35B WW10	**Prep Method:**	3015	**Prep Date:**	03/27/2014 12:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/31/2014 10:10
Workgroup #:	WG469156	**Analyst:**	PDM	**Run Date:**	03/31/2014 11:13
Collect Date:	03/12/2014 09:15	**Dilution:**	1	**File ID:**	T1.033114.111300
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.808		0.200	0.100
Calcium, Total	7440-70-2	6.69		0.500	0.250
Iron, Total	7439-89-6	2.53		0.100	0.0500
Magnesium, Total	7439-95-4	3.95		0.500	0.250
Potassium, Total	7440-09-7	1.02		1.00	0.500
Sodium, Total	7440-23-5	80.4		0.500	0.250
Strontium, Total	7440-24-6	0.220		0.0500	0.0250

Sample #:	L14031100-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35B WW10	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 13:00
Collect Date:	03/12/2014 09:15	**Dilution:**	1	**File ID:**	NI.033114.130024
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3	0.00223		0.00200	0.00100

Sample #:	L14031100-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35B WW10	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 11:00
Collect Date:	03/12/2014 09:15	**Dilution:**	1	**File ID:**	NI.033114.110058
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0847		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Copper, Total	7440-50-8	0.00189	J	0.00200	0.00100
Lead, Total	7439-92-1	0.00277		0.00100	0.000500
Manganese, Total	7439-96-5	0.101		0.00200	0.00100
Nickel, Total	7440-02-0	0.00372	J	0.00400	0.00200

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Selenium, Total	7782-49-2	0.00921		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00657		0.00100	0.000500
Zinc, Total	7440-66-6	0.0311		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-07
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG468027
Collect Date: 03/12/2014 11:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/21/2014 15:54
File ID: 8M395805

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.17		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.37		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.3	86	118	
1,2-Dichloroethane-d4	90.3	80	120	
Toluene-d8	91.1	88	110	
4-Bromofluorobenzene	95.5	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-07
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/12/2014 11:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 11:24
File ID: T1.033114.112414

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.242		0.200	0.100
Calcium, Total	7440-70-2	5.91		0.500	0.250
Iron, Total	7439-89-6	0.388		0.100	0.0500
Magnesium, Total	7439-95-4	2.17		0.500	0.250
Potassium, Total	7440-09-7	1.29		1.00	0.500
Sodium, Total	7440-23-5	29.8		0.500	0.250
Strontium, Total	7440-24-6	0.147		0.0500	0.0250

Sample #: L14031100-07
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG469179
Collect Date: 03/12/2014 11:20
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/28/2014 07:24
Cal Date: 03/31/2014 09:47
Run Date: 03/31/2014 13:03
File ID: NI.033114.130332

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3		ND	0.00200	0.00100

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 2-1	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 11:04
Collect Date:	03/12/2014 11:20	**Dilution:**	1	**File ID:**	NI.033114.110406
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0634		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.124		0.00200	0.00100
Nickel, Total	7440-02-0	0.00227	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00163		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000795	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 2-1D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 16:24
Collect Date:	03/12/2014 11:30	**Dilution:**	1	**File ID:**	8M395806
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250

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Lab Report #: L14031100
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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	0.961	J	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.19		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.1	86	118	
1,2-Dichloroethane-d4	88.1	80	120	
Toluene-d8	92.9	88	110	
4-Bromofluorobenzene	94.1	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-08
Client ID: MW 2-1D
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/12/2014 11:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 11:28
File ID: T1.033114.112800

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.265		0.200	0.100
Calcium, Total	7440-70-2	5.71		0.500	0.250
Iron, Total	7439-89-6	0.411		0.100	0.0500
Magnesium, Total	7439-95-4	2.13		0.500	0.250
Potassium, Total	7440-09-7	1.18		1.00	0.500
Sodium, Total	7440-23-5	29.8		0.500	0.250
Strontium, Total	7440-24-6	0.143		0.0500	0.0250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 2-1D	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 11:07
Collect Date:	03/12/2014 11:30	**Dilution:**	1	**File ID:**	NI.033114.110713
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0613		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.118		0.00200	0.00100
Nickel, Total	7440-02-0	0.00219	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00183		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000739	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 2-1D	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 13:06
Collect Date:	03/12/2014 11:30	**Dilution:**	1	**File ID:**	NI.033114.130640
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3		ND	0.00200	0.00100

ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	TRIP BLANK 12 MARCH 2014	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 12:57
Collect Date:	03/12/2014 00:01	**Dilution:**	1	**File ID:**	8M395799
Sample Tag:	01	**Units:**	ug/L		

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.5	86	118	
1,2-Dichloroethane-d4	87.8	80	120	
Toluene-d8	91.4	88	110	
4-Bromofluorobenzene	97.4	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-10	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 2-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 16:53
Collect Date:	03/12/2014 13:30	**Dilution:**	1	**File ID:**	8M395807
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.6	86	118	
1,2-Dichloroethane-d4	92.7	80	120	
Toluene-d8	90.5	88	110	
4-Bromofluorobenzene	96.4	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MW 2-2	**Prep Method:**	3015	**Prep Date:**	03/27/2014 12:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/31/2014 10:10
Workgroup #:	WG469156	**Analyst:**	PDM	**Run Date:**	03/31/2014 11:31
Collect Date:	03/12/2014 13:30	**Dilution:**	1	**File ID:**	T1.033114.113148
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	23.1		0.200	0.100
Calcium, Total	7440-70-2	5.62		0.500	0.250
Iron, Total	7439-89-6	40.1		0.100	0.0500
Magnesium, Total	7439-95-4	5.16		0.500	0.250
Potassium, Total	7440-09-7	3.94		1.00	0.500
Sodium, Total	7440-23-5	17.6		0.500	0.250
Strontium, Total	7440-24-6	0.195		0.0500	0.0250

Sample #:	L14031100-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 2-2	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	04/01/2014 09:24
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	04/01/2014 12:54
Collect Date:	03/12/2014 13:30	**Dilution:**	1	**File ID:**	NI.040114.125417
Sample Tag:	03	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3	0.0339		0.00200	0.00100

Sample #:	L14031100-10	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 2-2	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 11:10
Collect Date:	03/12/2014 13:30	**Dilution:**	1	**File ID:**	NI.033114.111021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Cadmium, Total	7440-43-9	0.000569	J	0.000600	0.000300
Copper, Total	7440-50-8	0.0226		0.00200	0.00100
Lead, Total	7439-92-1	0.0185		0.00100	0.000500
Manganese, Total	7439-96-5	0.140		0.00200	0.00100
Nickel, Total	7440-02-0	0.0434		0.00400	0.00200
Selenium, Total	7782-49-2	0.00317		0.00100	0.000500

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Analyte	CAS #	Result	Qual	RL	MDL
Thallium, Total	7440-28-0	0.000405		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0576		0.00100	0.000500
Zinc, Total	7440-66-6	0.189		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-10
Client ID: MW 2-2
Matrix: Water
Workgroup #: WG469179
Collect Date: 03/12/2014 13:30
Sample Tag: DL01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 50
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/28/2014 07:24
Cal Date: 03/31/2014 09:47
Run Date: 03/31/2014 11:30
File ID: NI.033114.113003

Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.330		0.150	0.0750

Sample #: L14031100-11
Client ID: MW 2-3
Matrix: Water
Workgroup #: WG468027
Collect Date: 03/12/2014 15:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/21/2014 17:23
File ID: 8M395808

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.259	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.8	86	118	
1,2-Dichloroethane-d4	90.9	80	120	
Toluene-d8	90.9	88	110	
4-Bromofluorobenzene	95.0	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-11
Client ID: MW 2-3
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/12/2014 15:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 11:35
File ID: T1.033114.113532

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.58		0.200	0.100
Calcium, Total	7440-70-2	8.61		0.500	0.250
Iron, Total	7439-89-6	1.72		0.100	0.0500
Magnesium, Total	7439-95-4	1.07		0.500	0.250
Potassium, Total	7440-09-7	2.63		1.00	0.500
Sodium, Total	7440-23-5	24.7		0.500	0.250
Strontium, Total	7440-24-6	1.24		0.0500	0.0250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 2-3	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	04/01/2014 09:24
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	04/01/2014 12:57
Collect Date:	03/12/2014 15:00	**Dilution:**	1	**File ID:**	NI.040114.125725
Sample Tag:	03	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3	0.00638		0.00200	0.00100

Sample #:	L14031100-11	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 2-3	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 11:13
Collect Date:	03/12/2014 15:00	**Dilution:**	1	**File ID:**	NI.033114.111329
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.123		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Copper, Total	7440-50-8	0.00154	J	0.00200	0.00100
Lead, Total	7439-92-1	0.00121		0.00100	0.000500
Manganese, Total	7439-96-5	0.0105		0.00200	0.00100
Nickel, Total	7440-02-0	0.00326	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00342		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00546		0.00100	0.000500
Zinc, Total	7440-66-6	0.0159	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-12	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35B WW09	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 17:53
Collect Date:	03/13/2014 09:00	**Dilution:**	1	**File ID:**	8M395809
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Lab Report #: L14031100
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.654	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	73.3		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	96.2	86	118	
1,2-Dichloroethane-d4	93.2	80	120	
Toluene-d8	92.8	88	110	
4-Bromofluorobenzene	96.1	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	35B WW09	**Prep Method:**	3015	**Prep Date:**	03/27/2014 12:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/31/2014 10:10
Workgroup #:	WG469156	**Analyst:**	PDM	**Run Date:**	03/31/2014 11:39
Collect Date:	03/13/2014 09:00	**Dilution:**	1	**File ID:**	T1.033114.113920
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	45.5		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	24.9		0.500	0.250
Potassium, Total	7440-09-7	2.02		1.00	0.500
Sodium, Total	7440-23-5	149		0.500	0.250
Strontium, Total	7440-24-6	1.43		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35B WW09	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 10:19
Collect Date:	03/13/2014 09:00	**Dilution:**	1	**File ID:**	NI.033114.101904
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0416		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000467	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00184	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0152		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00399		0.00100	0.000500
Thallium, Total	7440-28-0	0.000109	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000779	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-13	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35B WW09 MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 11:28
Collect Date:	03/13/2014 09:10	**Dilution:**	1	**File ID:**	8M395796
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	16.2		10.0	2.50
Benzene	71-43-2	17.5		1.00	0.125
Bromobenzene	108-86-1	18.1		1.00	0.125
Bromochloromethane	74-97-5	20.8		1.00	0.200
Bromodichloromethane	75-27-4	19.2		1.00	0.250
Bromoform	75-25-2	19.1		1.00	0.500
Bromomethane	74-83-9	23.2		1.00	0.500
2-Butanone	78-93-3	19.1		10.0	2.50
n-Butylbenzene	104-51-8	18.1		1.00	0.250
sec-Butylbenzene	135-98-8	16.7		1.00	0.250
tert-Butylbenzene	98-06-6	17.0		1.00	0.250
Carbon disulfide	75-15-0	16.6		1.00	0.500
Carbon tetrachloride	56-23-5	21.5		1.00	0.250
Chlorobenzene	108-90-7	17.3		1.00	0.125
Chlorodibromomethane	124-48-1	18.0		1.00	0.250
Chloroethane	75-00-3	21.0		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.2		1.00	0.125
Chloromethane	74-87-3	26.5		1.00	0.500
2-Chlorotoluene	95-49-8	16.8		1.00	0.125
4-Chlorotoluene	106-43-4	16.9		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	16.3		5.00	1.00
1,2-Dibromoethane	106-93-4	17.0		1.00	0.250
Dibromomethane	74-95-3	18.5		1.00	0.250
1,2-Dichlorobenzene	95-50-1	16.9		1.00	0.125
1,3-Dichlorobenzene	541-73-1	17.0		1.00	0.250
1,4-Dichlorobenzene	106-46-7	17.7		1.00	0.125
Dichlorodifluoromethane	75-71-8	43.0		1.00	0.250
1,1-Dichloroethane	75-34-3	18.2		1.00	0.125
1,2-Dichloroethane	107-06-2	19.5		1.00	0.250
1,1-Dichloroethene	75-35-4	17.7		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	21.5		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	17.9		1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	17.2		1.00	0.200
1,3-Dichloropropane	142-28-9	16.0		1.00	0.200
2,2-Dichloropropane	594-20-7	21.2		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	18.9		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	15.6		1.00	0.500
1,1-Dichloropropene	563-58-6	20.7		1.00	0.250
Ethylbenzene	100-41-4	18.3		1.00	0.250
2-Hexanone	591-78-6	14.7		10.0	2.50
Hexachlorobutadiene	87-68-3	18.6		1.00	0.250
Isopropylbenzene	98-82-8	18.2		1.00	0.250
p-Isopropyltoluene	99-87-6	17.2		1.00	0.250
4-Methyl-2-pentanone	108-10-1	15.9		10.0	2.50
Methylene chloride	75-09-2	17.2		5.00	0.250
Naphthalene	91-20-3	18.6		1.00	0.200
n-Propylbenzene	103-65-1	16.9		1.00	0.125
Styrene	100-42-5	19.1		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	18.4		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	16.5		1.00	0.200
Tetrachloroethene	127-18-4	17.1		1.00	0.250
Toluene	108-88-3	16.6		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	18.9		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	19.1		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.6		1.00	0.250
1,1,2-Trichloroethane	79-00-5	16.6		1.00	0.250
Trichloroethene	79-01-6	76.3		1.00	0.250
Trichlorofluoromethane	75-69-4	23.4		1.00	0.250
1,2,3-Trichloropropane	96-18-4	17.1		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	18.7		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	19.3		1.00	0.250
Vinyl acetate	108-05-4	21.6		10.0	2.50
Vinyl chloride	75-01-4	26.2		1.00	0.250
o-Xylene	95-47-6	17.4		1.00	0.250
m-,p-Xylene	179601-23-1	36.4		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	95.3	80	120	
Toluene-d8	81.8	88	110	*
4-Bromofluorobenzene	93.9	86	115	

*	Surrogate or spike compound out of range

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-13 **PrePrep Method:** N/A **Instrument:** ICP-THERMO1
Client ID: 35B WW09 MS **Prep Method:** 3015 **Prep Date:** 03/27/2014 12:58
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/31/2014 10:10
Workgroup #: WG469156 **Analyst:** PDM **Run Date:** 03/31/2014 11:43
Collect Date: 03/13/2014 09:10 **Dilution:** 1 **File ID:** T1.033114.114306
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	5.95		0.200	0.100
Calcium, Total	7440-70-2	51.0		0.500	0.250
Iron, Total	7439-89-6	2.42		0.100	0.0500
Magnesium, Total	7439-95-4	30.2		0.500	0.250
Potassium, Total	7440-09-7	31.9		1.00	0.500
Sodium, Total	7440-23-5	176		0.500	0.250
Strontium, Total	7440-24-6	2.00		0.0500	0.0250

Sample #: L14031100-13 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW09 MS **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 10:22
Collect Date: 03/13/2014 09:10 **Dilution:** 1 **File ID:** NI.033114.102212
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0654		0.00100	0.000500
Barium, Total	7440-39-3	0.102		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0639		0.000600	0.000300
Chromium, Total	7440-47-3	0.0619		0.00200	0.00100
Copper, Total	7440-50-8	0.0640		0.00200	0.00100
Lead, Total	7439-92-1	0.0641		0.00100	0.000500
Manganese, Total	7439-96-5	0.0749		0.00200	0.00100
Nickel, Total	7440-02-0	0.0637		0.00400	0.00200
Selenium, Total	7782-49-2	0.0708		0.00100	0.000500
Thallium, Total	7440-28-0	0.0637		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0667		0.00100	0.000500
Zinc, Total	7440-66-6	0.0733		0.0250	0.0125

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-14	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35B WW09 MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 11:57
Collect Date:	03/13/2014 09:20	**Dilution:**	1	**File ID:**	8M395797
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	16.8		10.0	2.50
Benzene	71-43-2	17.8		1.00	0.125
Bromobenzene	108-86-1	17.7		1.00	0.125
Bromochloromethane	74-97-5	18.4		1.00	0.200
Bromodichloromethane	75-27-4	18.3		1.00	0.250
Bromoform	75-25-2	18.3		1.00	0.500
Bromomethane	74-83-9	19.1		1.00	0.500
2-Butanone	78-93-3	16.0		10.0	2.50
n-Butylbenzene	104-51-8	17.8		1.00	0.250
sec-Butylbenzene	135-98-8	16.6		1.00	0.250
tert-Butylbenzene	98-06-6	16.8		1.00	0.250
Carbon disulfide	75-15-0	17.7		1.00	0.500
Carbon tetrachloride	56-23-5	19.0		1.00	0.250
Chlorobenzene	108-90-7	17.1		1.00	0.125
Chlorodibromomethane	124-48-1	18.7		1.00	0.250
Chloroethane	75-00-3	16.2		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	17.8		1.00	0.125
Chloromethane	74-87-3	21.8		1.00	0.500
2-Chlorotoluene	95-49-8	16.8		1.00	0.125
4-Chlorotoluene	106-43-4	16.7		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	15.6		5.00	1.00
1,2-Dibromoethane	106-93-4	17.8		1.00	0.250
Dibromomethane	74-95-3	18.0		1.00	0.250
1,2-Dichlorobenzene	95-50-1	16.6		1.00	0.125
1,3-Dichlorobenzene	541-73-1	16.8		1.00	0.250
1,4-Dichlorobenzene	106-46-7	17.6		1.00	0.125
Dichlorodifluoromethane	75-71-8	35.8		1.00	0.250
1,1-Dichloroethane	75-34-3	17.0		1.00	0.125
1,2-Dichloroethane	107-06-2	17.6		1.00	0.250
1,1-Dichloroethene	75-35-4	17.4		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	18.8		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	18.0		1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	17.6		1.00	0.200
1,3-Dichloropropane	142-28-9	16.9		1.00	0.200
2,2-Dichloropropane	594-20-7	17.8		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	18.5		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	16.6		1.00	0.500
1,1-Dichloropropene	563-58-6	17.6		1.00	0.250
Ethylbenzene	100-41-4	17.9		1.00	0.250
2-Hexanone	591-78-6	16.3		10.0	2.50
Hexachlorobutadiene	87-68-3	18.2		1.00	0.250
Isopropylbenzene	98-82-8	17.6		1.00	0.250
p-Isopropyltoluene	99-87-6	17.1		1.00	0.250
4-Methyl-2-pentanone	108-10-1	15.8		10.0	2.50
Methylene chloride	75-09-2	17.8		5.00	0.250
Naphthalene	91-20-3	18.4		1.00	0.200
n-Propylbenzene	103-65-1	16.9		1.00	0.125
Styrene	100-42-5	18.9		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	17.8		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	16.6		1.00	0.200
Tetrachloroethene	127-18-4	17.4		1.00	0.250
Toluene	108-88-3	18.0		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	18.6		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	18.8		1.00	0.200
1,1,1-Trichloroethane	71-55-6	18.7		1.00	0.250
1,1,2-Trichloroethane	79-00-5	17.7		1.00	0.250
Trichloroethene	79-01-6	75.5		1.00	0.250
Trichlorofluoromethane	75-69-4	21.2		1.00	0.250
1,2,3-Trichloropropane	96-18-4	17.0		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	18.4		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	19.0		1.00	0.250
Vinyl acetate	108-05-4	20.4		10.0	2.50
Vinyl chloride	75-01-4	21.6		1.00	0.250
o-Xylene	95-47-6	17.0		1.00	0.250
m-,p-Xylene	179601-23-1	36.2		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	91.4	86	118	
1,2-Dichloroethane-d4	85.1	80	120	
Toluene-d8	91.7	88	110	
4-Bromofluorobenzene	95.9	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	35B WW09 MSD	**Prep Method:**	3015	**Prep Date:**	03/27/2014 12:58
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/31/2014 10:10
Workgroup #:	WG469156	**Analyst:**	PDM	**Run Date:**	03/31/2014 11:46
Collect Date:	03/13/2014 09:20	**Dilution:**	1	**File ID:**	T1.033114.114643
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	5.91		0.200	0.100
Calcium, Total	7440-70-2	51.7		0.500	0.250
Iron, Total	7439-89-6	2.36		0.100	0.0500
Magnesium, Total	7439-95-4	30.6		0.500	0.250
Potassium, Total	7440-09-7	31.7		1.00	0.500
Sodium, Total	7440-23-5	178		0.500	0.250
Strontium, Total	7440-24-6	2.01		0.0500	0.0250

Sample #:	L14031100-14	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35B WW09 MSD	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 10:25
Collect Date:	03/13/2014 09:20	**Dilution:**	1	**File ID:**	NI.033114.102520
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0660		0.00100	0.000500
Barium, Total	7440-39-3	0.103		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0645		0.000600	0.000300
Chromium, Total	7440-47-3	0.0618		0.00200	0.00100
Copper, Total	7440-50-8	0.0656		0.00200	0.00100
Lead, Total	7439-92-1	0.0646		0.00100	0.000500
Manganese, Total	7439-96-5	0.0757		0.00200	0.00100
Nickel, Total	7440-02-0	0.0652		0.00400	0.00200
Selenium, Total	7782-49-2	0.0735		0.00100	0.000500
Thallium, Total	7440-28-0	0.0656		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0672		0.00100	0.000500
Zinc, Total	7440-66-6	0.0748		0.0250	0.0125

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-15	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 3-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468027	**Analyst:**	TMB	**Run Date:**	03/21/2014 18:23
Collect Date:	03/13/2014 12:15	**Dilution:**	1	**File ID:**	8M395810
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	19.0		10.0	2.50
Benzene	71-43-2	0.565	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6	0.449	J	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1	0.423	J	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	11.2		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.86		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.6	86	118	
1,2-Dichloroethane-d4	92.8	80	120	
Toluene-d8	90.8	88	110	
4-Bromofluorobenzene	96.2	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Contact: Kathy Albertson

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ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-15 **PrePrep Method:** N/A **Instrument:** ICP-THERMO1
Client ID: MW 3-1 **Prep Method:** 3015 **Prep Date:** 03/27/2014 12:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/31/2014 10:10
Workgroup #: WG469156 **Analyst:** PDM **Run Date:** 03/31/2014 11:50
Collect Date: 03/13/2014 12:15 **Dilution:** 1 **File ID:** T1.033114.115018
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.589		0.200	0.100
Calcium, Total	7440-70-2	73.1		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7	8.68		1.00	0.500
Sodium, Total	7440-23-5	80.8		0.500	0.250
Strontium, Total	7440-24-6	4.56		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-15 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 3-1 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 14:45
Collect Date: 03/13/2014 12:15 **Dilution:** 1 **File ID:** NI.033114.144540
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3	0.0136		0.00200	0.00100

Sample #: L14031100-15 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 3-1 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 11:16
Collect Date: 03/13/2014 12:15 **Dilution:** 1 **File ID:** NI.033114.111637
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.233		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Copper, Total	7440-50-8	0.00365		0.00200	0.00100

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Analyte	CAS #	Result	Qual	RL	MDL
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0	0.0204		0.00400	0.00200
Selenium, Total	7782-49-2	0.000594	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0284		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-16
Client ID: MW 3-2
Matrix: Water
Workgroup #: WG468027
Collect Date: 03/13/2014 15:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/21/2014 18:53
File ID: 8M395811

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	5.44	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.188	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	30.0		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.49		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.9	86	118	
1,2-Dichloroethane-d4	92.4	80	120	
Toluene-d8	90.3	88	110	
4-Bromofluorobenzene	93.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-16
Client ID: MW 3-2
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/13/2014 15:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 11:54
File ID: T1.033114.115405

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	21.5		0.500	0.250
Iron, Total	7439-89-6	0.0735	J	0.100	0.0500
Magnesium, Total	7439-95-4	3.53		0.500	0.250
Potassium, Total	7440-09-7	3.08		1.00	0.500
Sodium, Total	7440-23-5	31.3		0.500	0.250
Strontium, Total	7440-24-6	3.30		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-16
Client ID: MW 3-2
Matrix: Water
Workgroup #: WG469179
Collect Date: 03/13/2014 15:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/28/2014 07:24
Cal Date: 03/31/2014 09:47
Run Date: 03/31/2014 11:19
File ID: NI.033114.111945

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500

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Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.192		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0342		0.00200	0.00100
Nickel, Total	7440-02-0	0.00202	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00184		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00302		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-16
Client ID: MW 3-2
Matrix: Water
Workgroup #: WG469179
Collect Date: 03/13/2014 15:15
Sample Tag: 03

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/28/2014 07:24
Cal Date: 04/01/2014 09:24
Run Date: 04/01/2014 13:00
File ID: NI.040114.130033

Analyte	CAS #	Result	Qual	RL	MDL
Chromium, Total	7440-47-3	0.00344		0.00200	0.00100

Sample #: L14031100-17
Client ID: TRIP BLANK 13 MARCH 2014
Matrix: Water
Workgroup #: WG468027
Collect Date: 03/13/2014 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/21/2014 13:26
File ID: 8M395800

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200

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Analyte	CAS #	Result	Qual	RL	MDL
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.6	86	118	
1,2-Dichloroethane-d4	88.9	80	120	
Toluene-d8	90.5	88	110	
4-Bromofluorobenzene	95.5	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-18
Client ID: TRIP BLANK 14 MARCH 2014
Matrix: Water
Workgroup #: WG468027
Collect Date: 03/14/2014 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/21/2014 13:56
File ID: 8M395801

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.3	86	118	
1,2-Dichloroethane-d4	87.8	80	120	
Toluene-d8	90.4	88	110	
4-Bromofluorobenzene	95.8	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-19
Client ID: MW 3-3
Matrix: Water
Workgroup #: WG468027
Collect Date: 03/14/2014 09:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/21/2014 20:21
File ID: 8M395814

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	14.6		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.68		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.8	86	118	
1,2-Dichloroethane-d4	94.8	80	120	
Toluene-d8	91.3	88	110	
4-Bromofluorobenzene	95.4	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-19
Client ID: MW 3-3
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/14/2014 09:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 11:57
File ID: T1.033114.115754

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.470		0.200	0.100

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	10.4		0.500	0.250
Iron, Total	7439-89-6	0.701		0.100	0.0500
Magnesium, Total	7439-95-4	1.78		0.500	0.250
Potassium, Total	7440-09-7	1.82		1.00	0.500
Sodium, Total	7440-23-5	62.4		0.500	0.250
Strontium, Total	7440-24-6	1.38		0.0500	0.0250

Sample #: L14031100-19 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 3-3 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 12:22
Collect Date: 03/14/2014 09:10 **Dilution:** 1 **File ID:** NI.033114.122240
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.124		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00683		0.00200	0.00100
Copper, Total	7440-50-8	0.00108	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0161		0.00200	0.00100
Nickel, Total	7440-02-0	0.00209	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00756		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00641		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-20 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: 35B WW04 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 03/08/2014 16:01
Workgroup #: WG468027 **Analyst:** TMB **Run Date:** 03/21/2014 20:50
Collect Date: 03/14/2014 10:10 **Dilution:** 1 **File ID:** 8M395815
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.420	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.689	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.277	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	33.1		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.53		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.2	86	118	
1,2-Dichloroethane-d4	92.5	80	120	
Toluene-d8	90.0	88	110	
4-Bromofluorobenzene	94.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-20
Client ID: 35B WW04
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/14/2014 10:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 12:09
File ID: T1.033114.120912

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.688		0.200	0.100
Calcium, Total	7440-70-2	7.20		0.500	0.250
Iron, Total	7439-89-6	1.66		0.100	0.0500
Magnesium, Total	7439-95-4	3.70		0.500	0.250
Potassium, Total	7440-09-7	0.829	J	1.00	0.500
Sodium, Total	7440-23-5	59.1		0.500	0.250
Strontium, Total	7440-24-6	0.224		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14031100-20 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW04 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 12:25
Collect Date: 03/14/2014 10:10 **Dilution:** 1 **File ID:** NI.033114.122548
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0639		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000476	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00102	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00113	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000654	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00538		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00130		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00279		0.00100	0.000500
Zinc, Total	7440-66-6	0.0174	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-21 **PrePrep Method:** N/A **Instrument:** HPMS17
Client ID: MW 58 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 02/25/2014 18:55
Workgroup #: WG468132 **Analyst:** ADC **Run Date:** 03/21/2014 19:16
Collect Date: 03/14/2014 11:10 **Dilution:** 1 **File ID:** 17M003228
Sample Tag: 01 **Units:** ug/L

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	4.06		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.312	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.2	86	118	
1,2-Dichloroethane-d4	98.0	80	120	
Toluene-d8	106	88	110	
4-Bromofluorobenzene	122	86	115	*

*	Surrogate or spike compound out of range
J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO1
Client ID:	MW 58	**Prep Method:**	3015	**Prep Date:**	03/27/2014 12:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	03/31/2014 10:10
Workgroup #:	WG469156	**Analyst:**	PDM	**Run Date:**	03/31/2014 12:13
Collect Date:	03/14/2014 11:10	**Dilution:**	1	**File ID:**	T1.033114.121300
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	20.8		0.500	0.250
Iron, Total	7439-89-6	0.101		0.100	0.0500
Magnesium, Total	7439-95-4	6.77		0.500	0.250
Potassium, Total	7440-09-7	2.26		1.00	0.500
Sodium, Total	7440-23-5	33.3		0.500	0.250
Strontium, Total	7440-24-6	0.356		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 58	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 12:28
Collect Date:	03/14/2014 11:10	**Dilution:**	1	**File ID:**	NI.033114.122856
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.167		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00576		0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0140		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00186		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00256		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-22	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	35B WW03	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/25/2014 18:55
Workgroup #:	WG468132	**Analyst:**	ADC	**Run Date:**	03/21/2014 19:36
Collect Date:	03/14/2014 13:10	**Dilution:**	1	**File ID:**	17M003229
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.1	86	118	
1,2-Dichloroethane-d4	99.1	80	120	
Toluene-d8	109	88	110	
4-Bromofluorobenzene	128	86	115	*

*	Surrogate or spike compound out of range

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-22 **PrePrep Method:** N/A **Instrument:** ICP-THERMO1
Client ID: 35B WW03 **Prep Method:** 3015 **Prep Date:** 03/27/2014 12:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/31/2014 10:10
Workgroup #: WG469156 **Analyst:** PDM **Run Date:** 03/31/2014 12:16
Collect Date: 03/14/2014 13:10 **Dilution:** 1 **File ID:** T1.033114.121648
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	6.86		0.500	0.250
Iron, Total	7439-89-6	0.0569	J	0.100	0.0500
Magnesium, Total	7439-95-4	3.49		0.500	0.250
Potassium, Total	7440-09-7	5.32		1.00	0.500
Sodium, Total	7440-23-5	151		0.500	0.250
Strontium, Total	7440-24-6	0.730		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-22 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35B WW03 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 12:32
Collect Date: 03/14/2014 13:10 **Dilution:** 1 **File ID:** NI.033114.123203
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.132		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00403		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0162		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-23	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 4-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468417	**Analyst:**	TMB	**Run Date:**	03/25/2014 13:32
Collect Date:	03/17/2014 09:30	**Dilution:**	1	**File ID:**	8M395878
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.254	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.892	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.494	J	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	24.5		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.13		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	89.9	86	118	
1,2-Dichloroethane-d4	84.7	80	120	
Toluene-d8	88.1	88	110	
4-Bromofluorobenzene	96.0	86	115	

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-23 **PrePrep Method:** N/A **Instrument:** ICP-THERMO1
Client ID: MW 4-1 **Prep Method:** 3015 **Prep Date:** 03/27/2014 12:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 03/31/2014 10:10
Workgroup #: WG469156 **Analyst:** PDM **Run Date:** 03/31/2014 12:20
Collect Date: 03/17/2014 09:30 **Dilution:** 1 **File ID:** T1.033114.122036
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	17.9		0.500	0.250
Iron, Total	7439-89-6	0.409		0.100	0.0500
Magnesium, Total	7439-95-4	8.32		0.500	0.250
Potassium, Total	7440-09-7	1.82		1.00	0.500
Sodium, Total	7440-23-5	96.7		0.500	0.250
Strontium, Total	7440-24-6	0.523		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-23 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-1 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 12:35
Collect Date: 03/17/2014 09:30 **Dilution:** 1 **File ID:** NI.033114.123511
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0536		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.000665	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000664	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L14031100-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-1	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	04/01/2014 09:24
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	04/01/2014 13:03
Collect Date:	03/17/2014 09:30	**Dilution:**	50	**File ID:**	NI.040114.130341
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.399		0.100	0.0500

Sample #:	L14031100-24	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	TRIP BLANK 17 MARCH 2014	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/25/2014 18:55
Workgroup #:	WG468132	**Analyst:**	ADC	**Run Date:**	03/21/2014 17:38
Collect Date:	03/17/2014 00:01	**Dilution:**	1	**File ID:**	17M003223
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.6	86	118	
1,2-Dichloroethane-d4	97.4	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	128	86	115	*

*	Surrogate or spike compound out of range
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-25
Client ID: SW-2
Matrix: Water
Workgroup #: WG468132
Collect Date: 03/17/2014 08:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 02/25/2014 18:55
Run Date: 03/21/2014 20:15
File ID: 17M003231

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	2.75	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.5	86	118	
1,2-Dichloroethane-d4	99.7	80	120	
Toluene-d8	109	88	110	
4-Bromofluorobenzene	130	86	115	*

*	Surrogate or spike compound out of range
J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-25
Client ID: SW-2
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/17/2014 08:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 12:24
File ID: T1.033114.122423

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.615		0.200	0.100
Calcium, Total	7440-70-2	6.08		0.500	0.250
Iron, Total	7439-89-6	1.44		0.100	0.0500
Magnesium, Total	7439-95-4	2.05		0.500	0.250
Potassium, Total	7440-09-7	2.22		1.00	0.500
Sodium, Total	7440-23-5	5.24		0.500	0.250
Strontium, Total	7440-24-6	0.0648		0.0500	0.0250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L14031100-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	SW-2	**Prep Method:**	3015	**Prep Date:**	03/28/2014 07:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 09:47
Workgroup #:	WG469179	**Analyst:**	JYH	**Run Date:**	03/31/2014 12:38
Collect Date:	03/17/2014 08:45	**Dilution:**	1	**File ID:**	NI.033114.123819
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0496		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00113	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00202		0.00200	0.00100
Lead, Total	7439-92-1	0.00122		0.00100	0.000500
Manganese, Total	7439-96-5	0.0419		0.00200	0.00100
Nickel, Total	7440-02-0	0.00289	J	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00231		0.00100	0.000500
Zinc, Total	7440-66-6	0.0240	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L14031100-26	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	SW-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	02/25/2014 18:55
Workgroup #:	WG468132	**Analyst:**	ADC	**Run Date:**	03/21/2014 20:35
Collect Date:	03/17/2014 09:00	**Dilution:**	1	**File ID:**	17M003232
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	2.54	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	96.1	86	118	
1,2-Dichloroethane-d4	98.6	80	120	
Toluene-d8	109	88	110	
4-Bromofluorobenzene	130	86	115	*

*	Surrogate or spike compound out of range
J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-26
Client ID: SW-1
Matrix: Water
Workgroup #: WG469156
Collect Date: 03/17/2014 09:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: PDM
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO1
Prep Date: 03/27/2014 12:59
Cal Date: 03/31/2014 10:10
Run Date: 03/31/2014 12:28
File ID: T1.033114.122810

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.569		0.200	0.100
Calcium, Total	7440-70-2	5.32		0.500	0.250
Iron, Total	7439-89-6	1.25		0.100	0.0500
Magnesium, Total	7439-95-4	1.87		0.500	0.250
Potassium, Total	7440-09-7	2.01		1.00	0.500
Sodium, Total	7440-23-5	4.83		0.500	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Strontium, Total	7440-24-6	0.0570		0.0500	0.0250

Sample #: L14031100-26 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: SW-1 **Prep Method:** 3015 **Prep Date:** 03/28/2014 07:24
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 09:47
Workgroup #: WG469179 **Analyst:** JYH **Run Date:** 03/31/2014 12:41
Collect Date: 03/17/2014 09:00 **Dilution:** 1 **File ID:** NI.033114.124127
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0454		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00122	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00198	J	0.00200	0.00100
Lead, Total	7439-92-1	0.00124		0.00100	0.000500
Manganese, Total	7439-96-5	0.0527		0.00200	0.00100
Nickel, Total	7440-02-0	0.00282	J	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00252		0.00100	0.000500
Zinc, Total	7440-66-6	0.0243	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-27 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: MW 4-2 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 03/08/2014 16:01
Workgroup #: WG468417 **Analyst:** TMB **Run Date:** 03/25/2014 14:30
Collect Date: 03/17/2014 11:15 **Dilution:** 1 **File ID:** 8M395880
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.178	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.457	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	2.93		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.693	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	8.48		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	6.28		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.3	86	118	
1,2-Dichloroethane-d4	87.6	80	120	
Toluene-d8	89.0	88	110	
4-Bromofluorobenzene	95.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-27
Client ID: MW 4-2
Matrix: Water
Workgroup #: WG469157
Collect Date: 03/17/2014 11:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/27/2014 13:59
Cal Date: 04/01/2014 08:05
Run Date: 04/01/2014 14:28
File ID: T2.040114.142817

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	10.3		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	5.50		0.500	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Potassium, Total	7440-09-7	1.11		1.00	0.500
Sodium, Total	7440-23-5	95.6		0.500	0.250
Strontium, Total	7440-24-6	0.313		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-27 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-2 **Prep Method:** 3015 **Prep Date:** 03/28/2014 08:34
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 16:41
Workgroup #: WG469181 **Analyst:** JYH **Run Date:** 03/31/2014 17:22
Collect Date: 03/17/2014 11:15 **Dilution:** 1 **File ID:** NI.033114.172206
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0480		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00114	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0165		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00118		0.00100	0.000500
Thallium, Total	7440-28-0	0.000146	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00162		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-28 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: MW 4-3 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 03/08/2014 16:01
Workgroup #: WG468417 **Analyst:** TMB **Run Date:** 03/25/2014 14:59
Collect Date: 03/17/2014 13:00 **Dilution:** 1 **File ID:** 8M395881
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.302	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.10		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.332	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	4.05		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.38		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	90.5	86	118	
1,2-Dichloroethane-d4	85.4	80	120	
Toluene-d8	87.4	88	110	*
4-Bromofluorobenzene	94.2	86	115	

*	Surrogate or spike compound out of range
J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-28
Client ID: MW 4-3
Matrix: Water
Workgroup #: WG469157
Collect Date: 03/17/2014 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/27/2014 13:59
Cal Date: 04/01/2014 08:05
Run Date: 04/01/2014 14:31
File ID: T2.040114.143145

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.66		0.200	0.100
Calcium, Total	7440-70-2	4.00		0.500	0.250
Iron, Total	7439-89-6	3.65		0.100	0.0500
Magnesium, Total	7439-95-4	1.84		0.500	0.250
Potassium, Total	7440-09-7	0.996	J	1.00	0.500
Sodium, Total	7440-23-5	73.6		0.500	0.250
Strontium, Total	7440-24-6	0.0926		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14031100-28 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-3 **Prep Method:** 3015 **Prep Date:** 03/28/2014 08:34
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 16:41
Workgroup #: WG469181 **Analyst:** JYH **Run Date:** 03/31/2014 17:25
Collect Date: 03/17/2014 13:00 **Dilution:** 1 **File ID:** NI.033114.172514
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.107		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000321	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00603		0.00200	0.00100
Copper, Total	7440-50-8	0.00397		0.00200	0.00100
Lead, Total	7439-92-1	0.00240		0.00100	0.000500
Manganese, Total	7439-96-5	0.0488		0.00200	0.00100
Nickel, Total	7440-02-0	0.00742		0.00400	0.00200
Selenium, Total	7782-49-2	0.00269		0.00100	0.000500
Thallium, Total	7440-28-0	0.000144	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0120		0.00100	0.000500
Zinc, Total	7440-66-6	0.198		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-29 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: 35BWW17 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 03/08/2014 16:01
Workgroup #: WG468417 **Analyst:** TMB **Run Date:** 03/25/2014 14:01
Collect Date: 03/17/2014 14:15 **Dilution:** 1 **File ID:** 8M395879
Sample Tag: 01 **Units:** ug/L

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.24		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.349	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.1	86	118	
1,2-Dichloroethane-d4	85.7	80	120	
Toluene-d8	89.2	88	110	
4-Bromofluorobenzene	94.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	35BWW17	**Prep Method:**	3015	**Prep Date:**	03/27/2014 13:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/01/2014 08:05
Workgroup #:	WG469157	**Analyst:**	KHR	**Run Date:**	04/01/2014 13:47
Collect Date:	03/17/2014 14:15	**Dilution:**	1	**File ID:**	T2.040114.134721
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	4.82		0.200	0.100
Calcium, Total	7440-70-2	2.06		0.500	0.250
Iron, Total	7439-89-6	13.0		0.100	0.0500
Magnesium, Total	7439-95-4	1.49		0.500	0.250
Potassium, Total	7440-09-7	5.18		1.00	0.500
Sodium, Total	7440-23-5	21.2		0.500	0.250
Strontium, Total	7440-24-6	0.0627		0.0500	0.0250

Sample #:	L14031100-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW17	**Prep Method:**	3015	**Prep Date:**	03/28/2014 08:34
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 16:41
Workgroup #:	WG469181	**Analyst:**	JYH	**Run Date:**	03/31/2014 17:12
Collect Date:	03/17/2014 14:15	**Dilution:**	1	**File ID:**	NI.033114.171242
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0837		0.00300	0.00150
Cadmium, Total	7440-43-9	0.00128		0.000600	0.000300
Chromium, Total	7440-47-3	0.00979		0.00200	0.00100
Copper, Total	7440-50-8	0.00675		0.00200	0.00100
Lead, Total	7439-92-1	0.00571		0.00100	0.000500
Manganese, Total	7439-96-5	0.0564		0.00200	0.00100
Nickel, Total	7440-02-0	0.0126		0.00400	0.00200
Selenium, Total	7782-49-2	0.00118		0.00100	0.000500
Thallium, Total	7440-28-0	0.000126	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0102		0.00100	0.000500
Zinc, Total	7440-66-6	0.0462		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW17 MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468417	**Analyst:**	TMB	**Run Date:**	03/25/2014 12:05
Collect Date:	03/17/2014 14:30	**Dilution:**	1	**File ID:**	8M395875
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	16.5		10.0	2.50
Benzene	71-43-2	17.9		1.00	0.125
Bromobenzene	108-86-1	17.7		1.00	0.125
Bromochloromethane	74-97-5	18.0		1.00	0.200
Bromodichloromethane	75-27-4	18.0		1.00	0.250
Bromoform	75-25-2	17.2		1.00	0.500
Bromomethane	74-83-9	21.2		1.00	0.500
2-Butanone	78-93-3	15.7		10.0	2.50
n-Butylbenzene	104-51-8	18.3		1.00	0.250
sec-Butylbenzene	135-98-8	16.8		1.00	0.250
tert-Butylbenzene	98-06-6	16.6		1.00	0.250
Carbon disulfide	75-15-0	17.7		1.00	0.500
Carbon tetrachloride	56-23-5	18.7		1.00	0.250
Chlorobenzene	108-90-7	16.7		1.00	0.125
Chlorodibromomethane	124-48-1	17.8		1.00	0.250
Chloroethane	75-00-3	18.0		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	17.8		1.00	0.125
Chloromethane	74-87-3	22.1		1.00	0.500
2-Chlorotoluene	95-49-8	17.1		1.00	0.125
4-Chlorotoluene	106-43-4	16.6		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	15.0		5.00	1.00
1,2-Dibromoethane	106-93-4	16.9		1.00	0.250
Dibromomethane	74-95-3	17.4		1.00	0.250
1,2-Dichlorobenzene	95-50-1	16.5		1.00	0.125
1,3-Dichlorobenzene	541-73-1	16.7		1.00	0.250
1,4-Dichlorobenzene	106-46-7	17.4		1.00	0.125
Dichlorodifluoromethane	75-71-8	31.6		1.00	0.250
1,1-Dichloroethane	75-34-3	17.2		1.00	0.125
1,2-Dichloroethane	107-06-2	17.1		1.00	0.250
1,1-Dichloroethene	75-35-4	17.2		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	18.7		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	18.2		1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	17.4		1.00	0.200
1,3-Dichloropropane	142-28-9	16.0		1.00	0.200
2,2-Dichloropropane	594-20-7	18.3		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	18.6		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	16.3		1.00	0.500
1,1-Dichloropropene	563-58-6	17.8		1.00	0.250
Ethylbenzene	100-41-4	18.0		1.00	0.250
2-Hexanone	591-78-6	15.3		10.0	2.50
Hexachlorobutadiene	87-68-3	18.4		1.00	0.250
Isopropylbenzene	98-82-8	17.2		1.00	0.250
p-Isopropyltoluene	99-87-6	17.3		1.00	0.250
4-Methyl-2-pentanone	108-10-1	15.0		10.0	2.50
Methylene chloride	75-09-2	17.7		5.00	0.250
Naphthalene	91-20-3	17.4		1.00	0.200
n-Propylbenzene	103-65-1	16.9		1.00	0.125
Styrene	100-42-5	18.7		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	17.3		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	15.7		1.00	0.200
Tetrachloroethene	127-18-4	17.8		1.00	0.250
Toluene	108-88-3	17.9		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	17.8		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	18.2		1.00	0.200
1,1,1-Trichloroethane	71-55-6	18.7		1.00	0.250
1,1,2-Trichloroethane	79-00-5	16.8		1.00	0.250
Trichloroethene	79-01-6	18.4		1.00	0.250
Trichlorofluoromethane	75-69-4	21.3		1.00	0.250
1,2,3-Trichloropropane	96-18-4	16.3		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	18.7		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	19.3		1.00	0.250
Vinyl acetate	108-05-4	19.6		10.0	2.50
Vinyl chloride	75-01-4	21.6		1.00	0.250
o-Xylene	95-47-6	16.6		1.00	0.250
m-,p-Xylene	179601-23-1	35.6		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	90.5	86	118	
1,2-Dichloroethane-d4	82.5	80	120	
Toluene-d8	89.2	88	110	
4-Bromofluorobenzene	96.0	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	35BWW17 MS	**Prep Method:**	3015	**Prep Date:**	03/27/2014 13:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/01/2014 08:05
Workgroup #:	WG469157	**Analyst:**	KHR	**Run Date:**	04/01/2014 13:50
Collect Date:	03/17/2014 14:30	**Dilution:**	1	**File ID:**	T2.040114.135047
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	11.6		0.200	0.100
Calcium, Total	7440-70-2	8.21		0.500	0.250
Iron, Total	7439-89-6	13.9		0.100	0.0500
Magnesium, Total	7439-95-4	7.46		0.500	0.250
Potassium, Total	7440-09-7	35.6		1.00	0.500
Sodium, Total	7440-23-5	52.0		0.500	0.250
Strontium, Total	7440-24-6	0.683		0.0500	0.0250

Sample #:	L14031100-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW17 MS	**Prep Method:**	3015	**Prep Date:**	03/28/2014 08:34
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 16:41
Workgroup #:	WG469181	**Analyst:**	JYH	**Run Date:**	03/31/2014 17:15
Collect Date:	03/17/2014 14:30	**Dilution:**	1	**File ID:**	NI.033114.171550
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0336		0.00100	0.000500
Barium, Total	7440-39-3	0.135		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0560		0.000600	0.000300
Chromium, Total	7440-47-3	0.0643		0.00200	0.00100
Copper, Total	7440-50-8	0.0642		0.00200	0.00100
Lead, Total	7439-92-1	0.0620		0.00100	0.000500
Manganese, Total	7439-96-5	0.105		0.00200	0.00100
Nickel, Total	7440-02-0	0.0682		0.00400	0.00200
Selenium, Total	7782-49-2	0.0530		0.00100	0.000500
Thallium, Total	7440-28-0	0.0567		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0658		0.00100	0.000500
Zinc, Total	7440-66-6	0.222		0.0250	0.0125

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-31	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW17 MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468417	**Analyst:**	TMB	**Run Date:**	03/25/2014 12:34
Collect Date:	03/17/2014 14:45	**Dilution:**	1	**File ID:**	8M395876
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	15.9		10.0	2.50
Benzene	71-43-2	18.5		1.00	0.125
Bromobenzene	108-86-1	18.0		1.00	0.125
Bromochloromethane	74-97-5	18.1		1.00	0.200
Bromodichloromethane	75-27-4	18.3		1.00	0.250
Bromoform	75-25-2	17.8		1.00	0.500
Bromomethane	74-83-9	21.8		1.00	0.500
2-Butanone	78-93-3	15.8		10.0	2.50
n-Butylbenzene	104-51-8	18.5		1.00	0.250
sec-Butylbenzene	135-98-8	17.0		1.00	0.250
tert-Butylbenzene	98-06-6	17.3		1.00	0.250
Carbon disulfide	75-15-0	17.8		1.00	0.500
Carbon tetrachloride	56-23-5	19.4		1.00	0.250
Chlorobenzene	108-90-7	17.2		1.00	0.125
Chlorodibromomethane	124-48-1	18.1		1.00	0.250
Chloroethane	75-00-3	18.5		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	18.2		1.00	0.125
Chloromethane	74-87-3	22.7		1.00	0.500
2-Chlorotoluene	95-49-8	17.8		1.00	0.125
4-Chlorotoluene	106-43-4	16.3		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	15.3		5.00	1.00
1,2-Dibromoethane	106-93-4	17.5		1.00	0.250
Dibromomethane	74-95-3	17.9		1.00	0.250
1,2-Dichlorobenzene	95-50-1	16.7		1.00	0.125
1,3-Dichlorobenzene	541-73-1	17.1		1.00	0.250
1,4-Dichlorobenzene	106-46-7	17.7		1.00	0.125
Dichlorodifluoromethane	75-71-8	32.6		1.00	0.250
1,1-Dichloroethane	75-34-3	17.6		1.00	0.125
1,2-Dichloroethane	107-06-2	17.9		1.00	0.250
1,1-Dichloroethene	75-35-4	17.6		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	18.9		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	18.7		1.00	0.250

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	17.9		1.00	0.200
1,3-Dichloropropane	142-28-9	16.8		1.00	0.200
2,2-Dichloropropane	594-20-7	18.7		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	18.9		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	16.3		1.00	0.500
1,1-Dichloropropene	563-58-6	18.3		1.00	0.250
Ethylbenzene	100-41-4	18.3		1.00	0.250
2-Hexanone	591-78-6	16.0		10.0	2.50
Hexachlorobutadiene	87-68-3	18.4		1.00	0.250
Isopropylbenzene	98-82-8	17.8		1.00	0.250
p-Isopropyltoluene	99-87-6	17.6		1.00	0.250
4-Methyl-2-pentanone	108-10-1	15.8		10.0	2.50
Methylene chloride	75-09-2	17.9		5.00	0.250
Naphthalene	91-20-3	17.7		1.00	0.200
n-Propylbenzene	103-65-1	17.1		1.00	0.125
Styrene	100-42-5	19.2		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	17.6		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	15.9		1.00	0.200
Tetrachloroethene	127-18-4	18.4		1.00	0.250
Toluene	108-88-3	18.4		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	18.2		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	18.8		1.00	0.200
1,1,1-Trichloroethane	71-55-6	19.4		1.00	0.250
1,1,2-Trichloroethane	79-00-5	17.5		1.00	0.250
Trichloroethene	79-01-6	18.8		1.00	0.250
Trichlorofluoromethane	75-69-4	21.9		1.00	0.250
1,2,3-Trichloropropane	96-18-4	16.1		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	18.7		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	19.6		1.00	0.250
Vinyl acetate	108-05-4	20.0		10.0	2.50
Vinyl chloride	75-01-4	22.0		1.00	0.250
o-Xylene	95-47-6	17.3		1.00	0.250
m-,p-Xylene	179601-23-1	36.5		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	88.9	86	118	
1,2-Dichloroethane-d4	81.5	80	120	
Toluene-d8	88.2	88	110	
4-Bromofluorobenzene	94.2	86	115	

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	35BWW17 MSD	**Prep Method:**	3015	**Prep Date:**	03/27/2014 13:59
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	04/01/2014 08:05
Workgroup #:	WG469157	**Analyst:**	KHR	**Run Date:**	04/01/2014 13:54
Collect Date:	03/17/2014 14:45	**Dilution:**	1	**File ID:**	T2.040114.135400
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	12.9		0.200	0.100
Calcium, Total	7440-70-2	8.06		0.500	0.250
Iron, Total	7439-89-6	15.5		0.100	0.0500
Magnesium, Total	7439-95-4	7.41		0.500	0.250
Potassium, Total	7440-09-7	35.0		1.00	0.500
Sodium, Total	7440-23-5	51.6		0.500	0.250
Strontium, Total	7440-24-6	0.674		0.0500	0.0250

Sample #:	L14031100-31	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW17 MSD	**Prep Method:**	3015	**Prep Date:**	03/28/2014 08:34
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	03/31/2014 16:41
Workgroup #:	WG469181	**Analyst:**	JYH	**Run Date:**	03/31/2014 17:18
Collect Date:	03/17/2014 14:45	**Dilution:**	1	**File ID:**	NI.033114.171858
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0375		0.00100	0.000500
Barium, Total	7440-39-3	0.138		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0586		0.000600	0.000300
Chromium, Total	7440-47-3	0.0671		0.00200	0.00100
Copper, Total	7440-50-8	0.0656		0.00200	0.00100
Lead, Total	7439-92-1	0.0642		0.00100	0.000500
Manganese, Total	7439-96-5	0.111		0.00200	0.00100
Nickel, Total	7440-02-0	0.0703		0.00400	0.00200
Selenium, Total	7782-49-2	0.0550		0.00100	0.000500
Thallium, Total	7440-28-0	0.0590		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0679		0.00100	0.000500
Zinc, Total	7440-66-6	0.123		0.0250	0.0125

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-32	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW05	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468417	**Analyst:**	TMB	**Run Date:**	03/25/2014 15:28
Collect Date:	03/18/2014 09:15	**Dilution:**	1	**File ID:**	8M395882
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.346	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.95		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	15.1		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.3	86	118	
1,2-Dichloroethane-d4	88.7	80	120	
Toluene-d8	90.3	88	110	
4-Bromofluorobenzene	95.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-32 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW05 **Prep Method:** 3015 **Prep Date:** 03/27/2014 13:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 04/01/2014 08:05
Workgroup #: WG469157 **Analyst:** KHR **Run Date:** 04/01/2014 14:35
Collect Date: 03/18/2014 09:15 **Dilution:** 1 **File ID:** T2.040114.143512
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.521		0.200	0.100
Calcium, Total	7440-70-2	14.7		0.500	0.250
Iron, Total	7439-89-6	2.30		0.100	0.0500
Magnesium, Total	7439-95-4	8.07		0.500	0.250
Potassium, Total	7440-09-7	1.01		1.00	0.500
Sodium, Total	7440-23-5	70.6		0.500	0.250
Strontium, Total	7440-24-6	0.543		0.0500	0.0250

Sample #: L14031100-32 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW05 **Prep Method:** 3015 **Prep Date:** 03/28/2014 08:34
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 16:41
Workgroup #: WG469181 **Analyst:** JYH **Run Date:** 03/31/2014 17:44
Collect Date: 03/18/2014 09:15 **Dilution:** 1 **File ID:** NI.033114.174403
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0588		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00262		0.00200	0.00100
Copper, Total	7440-50-8	0.00165	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000635	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0893		0.00200	0.00100
Nickel, Total	7440-02-0	0.00288	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000701	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00278		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-33	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW05D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468417	**Analyst:**	TMB	**Run Date:**	03/25/2014 15:57
Collect Date:	03/18/2014 09:30	**Dilution:**	1	**File ID:**	8M395883
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.295	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.96		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	14.5		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	90.4	86	118	
1,2-Dichloroethane-d4	88.2	80	120	
Toluene-d8	89.0	88	110	
4-Bromofluorobenzene	94.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-33 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW05D **Prep Method:** 3015 **Prep Date:** 03/27/2014 13:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 04/01/2014 08:05
Workgroup #: WG469157 **Analyst:** KHR **Run Date:** 04/01/2014 14:38
Collect Date: 03/18/2014 09:30 **Dilution:** 1 **File ID:** T2.040114.143840
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.269		0.200	0.100
Calcium, Total	7440-70-2	14.8		0.500	0.250
Iron, Total	7439-89-6	2.32		0.100	0.0500
Magnesium, Total	7439-95-4	8.04		0.500	0.250
Potassium, Total	7440-09-7	0.955	J	1.00	0.500
Sodium, Total	7440-23-5	71.3		0.500	0.250
Strontium, Total	7440-24-6	0.546		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14031100-33 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW05D **Prep Method:** 3015 **Prep Date:** 03/28/2014 08:34
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 16:41
Workgroup #: WG469181 **Analyst:** JYH **Run Date:** 03/31/2014 17:47
Collect Date: 03/18/2014 09:30 **Dilution:** 1 **File ID:** NI.033114.174711
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0534		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00133	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0621		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.000885	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00236		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14031100
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14031100-34	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	FIELD BLANK 18 MARCH 2014	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	03/08/2014 16:01
Workgroup #:	WG468417	**Analyst:**	TMB	**Run Date:**	03/25/2014 16:26
Collect Date:	03/18/2014 08:30	**Dilution:**	1	**File ID:**	8M395884
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.250	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	93.2	86	118	
1,2-Dichloroethane-d4	87.9	80	120	
Toluene-d8	89.9	88	110	

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4-Bromofluorobenzene	96.0	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-34
Client ID: FIELD BLANK 18 MARCH 2014
Matrix: Water
Workgroup #: WG469157
Collect Date: 03/18/2014 08:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 03/27/2014 13:59
Cal Date: 04/01/2014 08:05
Run Date: 04/01/2014 14:42
File ID: T2.040114.144206

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5	0.289	J	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-34
Client ID: FIELD BLANK 18 MARCH 2014
Matrix: Water
Workgroup #: WG469181
Collect Date: 03/18/2014 08:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 03/28/2014 08:34
Cal Date: 03/31/2014 16:41
Run Date: 03/31/2014 17:50
File ID: NI.033114.175019

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-35
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG468417
Collect Date: 03/18/2014 10:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 03/08/2014 16:01
Run Date: 03/25/2014 16:55
File ID: 8M395885

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

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Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.8	86	118	
1,2-Dichloroethane-d4	88.5	80	120	
Toluene-d8	88.4	88	110	
4-Bromofluorobenzene	95.7	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-35 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW06 **Prep Method:** 3015 **Prep Date:** 03/27/2014 13:59
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 04/01/2014 08:05
Workgroup #: WG469157 **Analyst:** KHR **Run Date:** 04/01/2014 14:45
Collect Date: 03/18/2014 10:50 **Dilution:** 1 **File ID:** T2.040114.144537
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	73.1		0.500	0.250
Iron, Total	7439-89-6	11.1		0.100	0.0500
Magnesium, Total	7439-95-4	21.9		0.500	0.250
Potassium, Total	7440-09-7	2.56		1.00	0.500
Sodium, Total	7440-23-5	180		0.500	0.250
Strontium, Total	7440-24-6	2.31		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14031100-35 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW06 **Prep Method:** 3015 **Prep Date:** 03/28/2014 08:34
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 03/31/2014 16:41
Workgroup #: WG469181 **Analyst:** JYH **Run Date:** 03/31/2014 17:53
Collect Date: 03/18/2014 10:50 **Dilution:** 1 **File ID:** NI.033114.175327
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0681		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.223		0.00200	0.00100
Nickel, Total	7440-02-0	0.00202	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00344		0.00100	0.000500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

METHOD BLANK SUMMARY

Login Number: L14031100
Work Group: WG468132
Blank File ID: 17M003217
Blank Sample ID: WG468132-01
Prep Date: 03/21/14 15:40
Instrument ID: HPMS17
Analyzed Date: 03/21/14 15:40
Method: 8260B
Analyst: ADC

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG468132-02	17M003218	03/21/14 16:00	01
TRIP BLANK 17 MARCH 2014	L14031100-24	17M003223	03/21/14 17:38	01
MW 58	L14031100-21	17M003228	03/21/14 19:16	01
35B WW03	L14031100-22	17M003229	03/21/14 19:36	01
SW-2	L14031100-25	17M003231	03/21/14 20:15	01
SW-1	L14031100-26	17M003232	03/21/14 20:35	01

Report Name: BLANK_SUMMARY
PDF File ID: 3441740
Report generated 03/26/2014 14:03

METHOD BLANK SUMMARY

Login Number: L14031100
Work Group: WG468027
Blank File ID: 8M395794
Blank Sample ID: WG468027-01
Prep Date: 03/21/14 10:29
Instrument ID: HPMS8
Analyzed Date: 03/21/14 10:29
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG468027-02	8M395795	03/21/14 10:58	01
35B WW09 MS	L14031100-13	8M395796	03/21/14 11:28	01
35B WW09 MSD	L14031100-14	8M395797	03/21/14 11:57	01
FIELD BLANK 11 MARCH 2014	L14031100-04	8M395798	03/21/14 12:27	01
TRIP BLANK 12 MARCH 2014	L14031100-09	8M395799	03/21/14 12:57	01
TRIP BLANK 13 MARCH 2014	L14031100-17	8M395800	03/21/14 13:26	01
TRIP BLANK 14 MARCH 2014	L14031100-18	8M395801	03/21/14 13:56	01
MW 1-1	L14031100-02	8M395802	03/21/14 14:26	01
MW 1-2	L14031100-03	8M395803	03/21/14 14:55	01
MW 1-3	L14031100-05	8M395804	03/21/14 15:24	01
MW 2-1	L14031100-07	8M395805	03/21/14 15:54	01
MW 2-1D	L14031100-08	8M395806	03/21/14 16:24	01
MW 2-2	L14031100-10	8M395807	03/21/14 16:53	01
MW 2-3	L14031100-11	8M395808	03/21/14 17:23	01
35B WW09	L14031100-12	8M395809	03/21/14 17:53	01
MW 3-1	L14031100-15	8M395810	03/21/14 18:23	01
MW 3-2	L14031100-16	8M395811	03/21/14 18:53	01
35BWW08	L14031100-01	8M395812	03/21/14 19:22	01
35B WW10	L14031100-06	8M395813	03/21/14 19:51	01
MW 3-3	L14031100-19	8M395814	03/21/14 20:21	01
35B WW04	L14031100-20	8M395815	03/21/14 20:50	01

Report Name: BLANK_SUMMARY
PDF File ID: 3441740
Report generated 03/26/2014 14:03

METHOD BLANK SUMMARY

Login Number: L14031100
Work Group: WG468417
Blank File ID: 8M395873
Blank Sample ID: WG468417-01
Prep Date: 03/25/14 11:08
Instrument ID: HPMS8
Analyzed Date: 03/25/14 11:08
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG468417-02	8M395874	03/25/14 11:37	01
35BWW17 MS	L14031100-30	8M395875	03/25/14 12:05	01
35BWW17 MSD	L14031100-31	8M395876	03/25/14 12:34	01
MW 4-1	L14031100-23	8M395878	03/25/14 13:32	01
35BWW17	L14031100-29	8M395879	03/25/14 14:01	01
MW 4-2	L14031100-27	8M395880	03/25/14 14:30	01
MW 4-3	L14031100-28	8M395881	03/25/14 14:59	01
35BWW05	L14031100-32	8M395882	03/25/14 15:28	01
35BWW05D	L14031100-33	8M395883	03/25/14 15:57	01
FIELD BLANK 18 MARCH 2014	L14031100-34	8M395884	03/25/14 16:26	01
35BWW06	L14031100-35	8M395885	03/25/14 16:55	01

Report Name: BLANK_SUMMARY
PDF File ID: 3441740
Report generated 03/26/2014 14:03

METHOD BLANK SUMMARY

Login Number: L14031100
Work Group: WG468417
Blank File ID: 8M395893
Blank Sample ID: WG468417-06
Prep Date: 03/25/14 20:46
Instrument ID: HPMS8
Analyzed Date: 03/25/14 20:46
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG468417-02	8M395874	03/25/14 11:37	01
35BWW17 MS	L14031100-30	8M395875	03/25/14 12:05	01
35BWW17 MSD	L14031100-31	8M395876	03/25/14 12:34	01
MW 4-1	L14031100-23	8M395878	03/25/14 13:32	01
35BWW17	L14031100-29	8M395879	03/25/14 14:01	01
MW 4-2	L14031100-27	8M395880	03/25/14 14:30	01
MW 4-3	L14031100-28	8M395881	03/25/14 14:59	01
35BWW05	L14031100-32	8M395882	03/25/14 15:28	01
35BWW05D	L14031100-33	8M395883	03/25/14 15:57	01
FIELD BLANK 18 MARCH 2014	L14031100-34	8M395884	03/25/14 16:26	01
35BWW06	L14031100-35	8M395885	03/25/14 16:55	01

Report Name: BLANK_SUMMARY
PDF File ID: 3441740
Report generated 03/26/2014 14:03

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14031100 Prep Date:03/21/14 15:40 Sample ID:WG468132-01
Instrument ID:HPMS17 Run Date:03/21/14 15:40 Prep Method:5030B/5030C/503
File ID:17M003217 Analyst:ADC Method:8260B
Workgroup (AAB#):WG468132 Matrix:Water Units:ug/L
Contract #: Cal ID:HPMS17-25-FEB-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3441741
26-MAR-2014 14:04

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14031100 Prep Date:03/21/14 15:40 Sample ID:WG468132-01
Instrument ID:HPMS17 Run Date:03/21/14 15:40 Prep Method:5030B/5030C/503
File ID:17M003217 Analyst:ADC Method:8260B
Workgroup (AAB#):WG468132 Matrix:Water Units:ug/L
Contract #: Cal ID:HPMS17-25-FEB-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	91.1	86 - 118	PASS
1,2-Dichloroethane-d4	92.4	80 - 120	PASS
Toluene-d8	104	88 - 110	PASS
4-Bromofluorobenzene	124	86 - 115	FAIL

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3441741
26-MAR-2014 14:04

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14031100 Prep Date:03/21/14 10:29 Sample ID:WG468027-01
Instrument ID:HPMS8 Run Date:03/21/14 10:29 Prep Method:5030B/5030C/503
File ID:8M395794 Analyst:TMB Method:8260B
Workgroup (AAB#):WG468027 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-08-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3441741
26-MAR-2014 14:04

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14031100 Prep Date: 03/21/14 10:29 Sample ID: WG468027-01
Instrument ID: HPMS8 Run Date: 03/21/14 10:29 Prep Method: 5030B/5030C/503
File ID: 8M395794 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG468027 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-08-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	90.9	86 - 118	PASS
1,2-Dichloroethane-d4	87.5	80 - 120	PASS
Toluene-d8	91.2	88 - 110	PASS
4-Bromofluorobenzene	95.7	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3441741
26-MAR-2014 14:04

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14031100 Prep Date:03/25/14 11:08 Sample ID:WG468417-01
Instrument ID:HPMS8 Run Date:03/25/14 11:08 Prep Method:5030B/5030C/503
File ID:8M395873 Analyst:TMB Method:8260B
Workgroup (AAB#):WG468417 Matrix:Water Units:ug/L
Contract #: Cal ID: HPMS8-08-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3441741
26-MAR-2014 14:04

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14031100 Prep Date: 03/25/14 11:08 Sample ID: WG468417-01
Instrument ID: HPMS8 Run Date: 03/25/14 11:08 Prep Method: 5030B/5030C/503
File ID: 8M395873 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG468417 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-08-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	90.5	86 - 118	PASS
1,2-Dichloroethane-d4	85.2	80 - 120	PASS
Toluene-d8	90.5	88 - 110	PASS
4-Bromofluorobenzene	95.4	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3441741
26-MAR-2014 14:04

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14031100 Prep Date:03/25/14 20:46 Sample ID:WG468417-06
Instrument ID:HPMS8 Run Date:03/25/14 20:46 Prep Method:5030B/5030C/503
File ID:8M395893 Analyst:TMB Method:8260B
Workgroup (AAB#):WG468417 Matrix:Water 2 Units:ug/L
Contract #: Cal ID: HPMS8-08-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3441741
26-MAR-2014 14:04

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14031100 Prep Date:03/25/14 20:46 Sample ID:WG468417-06
Instrument ID:HPMS8 Run Date:03/25/14 20:46 Prep Method:5030B/5030C/503
File ID:8M395893 Analyst:TMB Method:8260B
Workgroup (AAB#):WG468417 Matrix:Water 2 Units:ug/L
Contract #: Cal ID: HPMS8-08-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	95.5	86 - 118	PASS
1,2-Dichloroethane-d4	91.6	80 - 120	PASS
Toluene-d8	90.5	88 - 110	PASS
4-Bromofluorobenzene	95.7	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3441741
26-MAR-2014 14:04

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14031100 Run Date: 03/21/2014 Sample ID: WG468132-02
Instrument ID: HPMS17 Run Time: 16:00 Prep Method: 5030B/5030C/503
File ID: 17M003218 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG468132 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD63374 Cal ID: HPMS17-25-FEB-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	24.1	120	40 - 180	
Benzene	20.0	20.7	103	80 - 121	
Bromobenzene	20.0	24.5	122	80 - 120	*
Bromochloromethane	20.0	21.3	107	65 - 130	
Bromodichloromethane	20.0	21.0	105	80 - 131	
Bromoform	20.0	20.8	104	70 - 130	
Bromomethane	20.0	22.0	110	30 - 145	
2-Butanone	20.0	27.4	137	10 - 170	
n-Butylbenzene	20.0	24.5	122	80 - 131	
sec-Butylbenzene	20.0	23.8	119	80 - 127	
tert-Butylbenzene	20.0	22.4	112	80 - 126	
Carbon disulfide	20.0	17.6	88.1	58 - 128	
Carbon tetrachloride	20.0	20.2	101	65 - 140	
Chlorobenzene	20.0	20.6	103	80 - 120	
Chlorodibromomethane	20.0	23.6	118	60 - 135	
Chloroethane	20.0	26.9	134	60 - 135	
2-Chloroethyl vinyl ether	20.0	24.5	123	45 - 160	
Chloroform	20.0	20.4	102	80 - 125	
Chloromethane	20.0	24.1	120	40 - 125	
2-Chlorotoluene	20.0	23.7	119	80 - 127	
4-Chlorotoluene	20.0	23.1	116	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	28.8	144	50 - 130	*
1,2-Dibromoethane	20.0	24.2	121	80 - 129	
Dibromomethane	20.0	21.9	110	75 - 125	
1,2-Dichlorobenzene	20.0	23.0	115	80 - 125	
1,3-Dichlorobenzene	20.0	23.0	115	80 - 120	
1,4-Dichlorobenzene	20.0	23.6	118	80 - 120	
Dichlorodifluoromethane	20.0	32.3	162	40 - 160	*
1,1-Dichloroethane	20.0	21.0	105	80 - 125	
1,2-Dichloroethane	20.0	22.0	110	80 - 129	
1,1-Dichloroethene	20.0	19.1	95.3	80 - 132	
cis-1,2-Dichloroethene	20.0	20.2	101	70 - 125	
trans-1,2-Dichloroethene	20.0	20.0	100	80 - 127	
1,2-Dichloropropane	20.0	21.2	106	80 - 120	
1,3-Dichloropropane	20.0	23.6	118	80 - 120	
2,2-Dichloropropane	20.0	19.6	98.2	80 - 133	
cis-1,3-Dichloropropene	20.0	21.4	107	70 - 130	
trans-1,3-Dichloropropene	20.0	20.7	104	80 - 130	
1,1-Dichloropropene	20.0	19.8	98.9	75 - 130	
Ethylbenzene	20.0	21.4	107	80 - 122	
2-Hexanone	20.0	29.3	147	55 - 130	*

LCS - Modified 03/06/2008
PDF File ID: 3436368
Report generated: 03/26/2014 14:04

Login Number: L14031100 Run Date: 03/21/2014 Sample ID: WG468132-02
Instrument ID: HPMS17 Run Time: 16:00 Prep Method: 5030B/5030C/503
File ID: 17M003218 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG468132 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD63374 Cal ID: HPMS17-25-FEB-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	23.2	116	72 - 132	
Isopropylbenzene	20.0	21.5	107	80 - 122	
p-Isopropyltoluene	20.0	23.2	116	80 - 122	
4-Methyl-2-pentanone	20.0	25.3	126	64 - 140	
Methylene chloride	20.0	20.5	103	80 - 123	
Naphthalene	20.0	26.2	131	59 - 149	
n-Propylbenzene	20.0	23.7	118	80 - 129	
Styrene	20.0	22.3	111	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	22.0	110	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	28.3	141	79 - 125	*
Tetrachloroethene	20.0	20.9	104	80 - 124	
Toluene	20.0	22.7	113	80 - 124	
1,2,3-Trichlorobenzene	20.0	24.6	123	55 - 140	
1,2,4-Trichlorobenzene	20.0	22.5	112	65 - 135	
1,1,1-Trichloroethane	20.0	20.1	101	80 - 134	
1,1,2-Trichloroethane	20.0	24.1	120	80 - 125	
Trichloroethene	20.0	19.4	96.8	80 - 122	
Trichlorofluoromethane	20.0	23.0	115	62 - 151	
1,2,3-Trichloropropane	20.0	26.9	134	75 - 125	*
1,2,4-Trimethylbenzene	20.0	25.8	129	80 - 125	*
1,3,5-Trimethylbenzene	20.0	25.8	129	80 - 127	*
Vinyl acetate	20.0	31.7	158	10 - 190	
Vinyl chloride	20.0	22.1	110	50 - 170	
o-Xylene	20.0	20.2	101	80 - 122	
m-,p-Xylene	40.0	43.4	109	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	100	86 - 118	PASS
1,2-Dichloroethane-d4	99.6	80 - 120	PASS
Toluene-d8	108	88 - 110	PASS
4-Bromofluorobenzene	124	86 - 115	FAIL

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3436368
Report generated: 03/26/2014 14:04

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14031100 Run Date: 03/21/2014 Sample ID: WG468027-02
Instrument ID: HPMS8 Run Time: 10:58 Prep Method: 5030B/5030C/503
File ID: 8M395795 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG468027 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD63423 Cal ID: HPMS8-08-MAR-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	17.6	87.9	40 - 180	
Benzene	20.0	18.0	90.1	80 - 121	
Bromobenzene	20.0	18.1	90.5	80 - 120	
Bromochloromethane	20.0	17.8	88.9	65 - 130	
Bromodichloromethane	20.0	18.1	90.7	80 - 131	
Bromoform	20.0	18.4	91.8	70 - 130	
Bromomethane	20.0	22.4	112	30 - 145	
2-Butanone	20.0	16.5	82.3	10 - 170	
n-Butylbenzene	20.0	18.3	91.4	80 - 131	
sec-Butylbenzene	20.0	16.9	84.4	80 - 127	
tert-Butylbenzene	20.0	17.4	86.9	80 - 126	
Carbon disulfide	20.0	18.0	90.1	58 - 128	
Carbon tetrachloride	20.0	18.9	94.6	65 - 140	
Chlorobenzene	20.0	17.1	85.7	80 - 120	
Chlorodibromomethane	20.0	18.9	94.3	60 - 135	
Chloroethane	20.0	20.1	101	60 - 135	
2-Chloroethyl vinyl ether	20.0	16.9	84.3	45 - 160	
Chloroform	20.0	17.9	89.6	80 - 125	
Chloromethane	20.0	22.3	112	40 - 125	
2-Chlorotoluene	20.0	17.9	89.3	80 - 127	
4-Chlorotoluene	20.0	16.6	82.9	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	15.5	77.5	50 - 130	
1,2-Dibromoethane	20.0	17.6	88.2	80 - 129	
Dibromomethane	20.0	18.0	90.0	75 - 125	
1,2-Dichlorobenzene	20.0	17.0	85.2	80 - 125	
1,3-Dichlorobenzene	20.0	17.1	85.6	80 - 120	
1,4-Dichlorobenzene	20.0	17.9	89.6	80 - 120	
Dichlorodifluoromethane	20.0	32.9	164	40 - 160	*
1,1-Dichloroethane	20.0	17.1	85.5	80 - 125	
1,2-Dichloroethane	20.0	17.9	89.3	80 - 129	
1,1-Dichloroethene	20.0	17.9	89.3	80 - 132	
cis-1,2-Dichloroethene	20.0	18.3	91.7	70 - 125	
trans-1,2-Dichloroethene	20.0	18.3	91.3	80 - 127	
1,2-Dichloropropane	20.0	17.8	88.8	80 - 120	
1,3-Dichloropropane	20.0	16.9	84.4	80 - 120	
2,2-Dichloropropane	20.0	18.2	90.8	80 - 133	
cis-1,3-Dichloropropene	20.0	18.5	92.6	70 - 130	
trans-1,3-Dichloropropene	20.0	16.5	82.3	80 - 130	
1,1-Dichloropropene	20.0	17.9	89.3	75 - 130	
Ethylbenzene	20.0	18.5	92.3	80 - 122	
2-Hexanone	20.0	16.1	80.7	55 - 130	

LCS - Modified 03/06/2008
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Login Number: L14031100 Run Date: 03/21/2014 Sample ID: WG468027-02
Instrument ID: HPMS8 Run Time: 10:58 Prep Method: 5030B/5030C/503
File ID: 8M395795 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG468027 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD63423 Cal ID: HPMS8-08-MAR-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	18.4	92.0	72 - 132	
Isopropylbenzene	20.0	18.0	89.8	80 - 122	
p-Isopropyltoluene	20.0	17.4	87.0	80 - 122	
4-Methyl-2-pentanone	20.0	16.3	81.5	64 - 140	
Methylene chloride	20.0	17.6	88.1	80 - 123	
Naphthalene	20.0	17.9	89.7	59 - 149	
n-Propylbenzene	20.0	17.2	86.0	80 - 129	
Styrene	20.0	19.5	97.4	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	17.9	89.6	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	16.0	80.0	79 - 125	
Tetrachloroethene	20.0	17.5	87.4	80 - 124	
Toluene	20.0	18.3	91.3	80 - 124	
1,2,3-Trichlorobenzene	20.0	18.8	94.2	55 - 140	
1,2,4-Trichlorobenzene	20.0	18.9	94.5	65 - 135	
1,1,1-Trichloroethane	20.0	19.0	95.0	80 - 134	
1,1,2-Trichloroethane	20.0	17.8	88.8	80 - 125	
Trichloroethene	20.0	18.4	91.8	80 - 122	
Trichlorofluoromethane	20.0	22.1	110	62 - 151	
1,2,3-Trichloropropane	20.0	16.7	83.7	75 - 125	
1,2,4-Trimethylbenzene	20.0	18.9	94.6	80 - 125	
1,3,5-Trimethylbenzene	20.0	19.8	98.8	80 - 127	
Vinyl acetate	20.0	19.0	94.9	10 - 190	
Vinyl chloride	20.0	21.8	109	50 - 170	
o-Xylene	20.0	17.3	86.3	80 - 122	
m-,p-Xylene	40.0	36.6	91.4	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	92.3	86 - 118	PASS
1,2-Dichloroethane-d4	85.8	80 - 120	PASS
Toluene-d8	91.1	88 - 110	PASS
4-Bromofluorobenzene	95.8	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3436368
Report generated: 03/26/2014 14:04

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14031100 Run Date: 03/25/2014 Sample ID: WG468417-02
Instrument ID: HPMS8 Run Time: 11:37 Prep Method: 5030B/5030C/503
File ID: 8M395874 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG468417 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD63423 Cal ID: HPMS8-08-MAR-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	17.6	87.8	40 - 180	
Benzene	20.0	18.9	94.6	80 - 121	
Bromobenzene	20.0	18.4	92.1	80 - 120	
Bromochloromethane	20.0	18.6	92.8	65 - 130	
Bromodichloromethane	20.0	18.4	92.2	80 - 131	
Bromoform	20.0	17.8	89.1	70 - 130	
Bromomethane	20.0	21.6	108	30 - 145	
2-Butanone	20.0	16.5	82.6	10 - 170	
n-Butylbenzene	20.0	18.9	94.6	80 - 131	
sec-Butylbenzene	20.0	17.7	88.4	80 - 127	
tert-Butylbenzene	20.0	17.8	89.0	80 - 126	
Carbon disulfide	20.0	18.4	92.0	58 - 128	
Carbon tetrachloride	20.0	20.1	100	65 - 140	
Chlorobenzene	20.0	17.3	86.6	80 - 120	
Chlorodibromomethane	20.0	18.4	92.1	60 - 135	
Chloroethane	20.0	19.1	95.7	60 - 135	
2-Chloroethyl vinyl ether	20.0	17.0	85.1	45 - 160	
Chloroform	20.0	18.6	93.1	80 - 125	
Chloromethane	20.0	24.5	123	40 - 125	
2-Chlorotoluene	20.0	17.8	89.2	80 - 127	
4-Chlorotoluene	20.0	17.5	87.3	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	14.3	71.4	50 - 130	
1,2-Dibromoethane	20.0	17.2	86.1	80 - 129	
Dibromomethane	20.0	18.2	90.8	75 - 125	
1,2-Dichlorobenzene	20.0	17.1	85.5	80 - 125	
1,3-Dichlorobenzene	20.0	17.4	87.2	80 - 120	
1,4-Dichlorobenzene	20.0	18.2	90.9	80 - 120	
Dichlorodifluoromethane	20.0	37.4	187	40 - 160	*
1,1-Dichloroethane	20.0	18.0	90.2	80 - 125	
1,2-Dichloroethane	20.0	18.0	90.0	80 - 129	
1,1-Dichloroethene	20.0	18.4	91.8	80 - 132	
cis-1,2-Dichloroethene	20.0	19.3	96.7	70 - 125	
trans-1,2-Dichloroethene	20.0	19.1	95.6	80 - 127	
1,2-Dichloropropane	20.0	18.1	90.5	80 - 120	
1,3-Dichloropropane	20.0	16.7	83.5	80 - 120	
2,2-Dichloropropane	20.0	18.5	92.3	80 - 133	
cis-1,3-Dichloropropene	20.0	19.1	95.5	70 - 130	
trans-1,3-Dichloropropene	20.0	16.2	81.0	80 - 130	
1,1-Dichloropropene	20.0	18.9	94.4	75 - 130	
Ethylbenzene	20.0	18.6	92.8	80 - 122	
2-Hexanone	20.0	15.2	76.2	55 - 130	

LCS - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14031100 Run Date: 03/25/2014 Sample ID: WG468417-02
Instrument ID: HPMS8 Run Time: 11:37 Prep Method: 5030B/5030C/503
File ID: 8M395874 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG468417 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD63423 Cal ID: HPMS8-08-MAR-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	18.9	94.5	72 - 132	
Isopropylbenzene	20.0	18.1	90.7	80 - 122	
p-Isopropyltoluene	20.0	18.0	90.0	80 - 122	
4-Methyl-2-pentanone	20.0	16.0	80.0	64 - 140	
Methylene chloride	20.0	18.1	90.7	80 - 123	
Naphthalene	20.0	17.9	89.3	59 - 149	
n-Propylbenzene	20.0	17.8	89.1	80 - 129	
Styrene	20.0	19.3	96.6	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	18.1	90.4	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	16.1	80.6	79 - 125	
Tetrachloroethene	20.0	18.2	90.9	80 - 124	
Toluene	20.0	18.7	93.4	80 - 124	
1,2,3-Trichlorobenzene	20.0	18.5	92.3	55 - 140	
1,2,4-Trichlorobenzene	20.0	18.7	93.4	65 - 135	
1,1,1-Trichloroethane	20.0	19.8	99.0	80 - 134	
1,1,2-Trichloroethane	20.0	17.2	86.2	80 - 125	
Trichloroethene	20.0	19.1	95.6	80 - 122	
Trichlorofluoromethane	20.0	23.1	115	62 - 151	
1,2,3-Trichloropropane	20.0	17.0	85.0	75 - 125	
1,2,4-Trimethylbenzene	20.0	19.3	96.4	80 - 125	
1,3,5-Trimethylbenzene	20.0	20.1	101	80 - 127	
Vinyl acetate	20.0	18.1	90.7	10 - 190	
Vinyl chloride	20.0	23.6	118	50 - 170	
o-Xylene	20.0	17.3	86.5	80 - 122	
m-,p-Xylene	40.0	36.8	92.1	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	90.4	86 - 118	PASS
1,2-Dichloroethane-d4	83.6	80 - 120	PASS
Toluene-d8	89.7	88 - 110	PASS
4-Bromofluorobenzene	97.5	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3436368
Report generated: 03/26/2014 14:04

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14031100 Cal ID: HPMS8- 08-MAR-14 Worknum: WG468027

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14031100-12 File ID: 8M395809 Dil: 1 Method: 5035A

Sample ID: L14031100-13 MS File ID: 8M395796 Dil: 1 Matrix: 8260B

Sample ID: L14031100-14 MSD File ID: 8M395797 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	18.4	91.8	20.0	17.8	89.2	2.89	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	21.6	108	20.0	18.7	93.7	14.0	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	16.5	82.5	20.0	16.6	82.9	0.510	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	16.6	82.9	20.0	17.7	88.7	6.76	80 - 125	20	
1,1-Dichloroethane	ND	20.0	18.2	91	20.0	17.0	85.1	6.71	80 - 125	20	
1,1-Dichloroethene	ND	20.0	17.7	88.3	20.0	17.4	86.8	1.63	80 - 132	20	
1,1-Dichloropropene	ND	20.0	20.7	104	20.0	17.6	87.8	16.5	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	18.9	94.6	20.0	18.6	92.9	1.79	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	17.1	85.7	20.0	17.0	84.8	1.12	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	19.1	95.5	20.0	18.8	94.2	1.41	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	18.7	93.4	20.0	18.4	91.8	1.66	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	16.3	81.5	20.0	15.6	78.1	4.22	50 - 130	20	
1,2-Dibromoethane	ND	20.0	17.0	85.2	20.0	17.8	88.8	4.08	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	16.9	84.3	20.0	16.6	82.8	1.73	80 - 125	20	
1,2-Dichloroethane	ND	20.0	19.5	97.4	20.0	17.6	88.2	9.91	80 - 129	20	
1,2-Dichloropropane	ND	20.0	17.2	86.1	20.0	17.6	88.2	2.46	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	19.3	96.4	20.0	19.0	95.2	1.25	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	17.0	84.9	20.0	16.8	84.2	0.873	80 - 120	20	
1,3-Dichloropropane	ND	20.0	16.0	80	20.0	16.9	84.7	5.67	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	17.7	88.4	20.0	17.6	87.8	0.743	80 - 120	20	
2,2-Dichloropropane	ND	20.0	21.2	106	20.0	17.8	88.9	17.6	80 - 133	20	
2-Butanone	ND	20.0	19.1	95.4	20.0	16.0	80.1	17.4	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	16.8	83.8	20.0	16.8	83.8	0.0054	80 - 127	20	
2-Hexanone	ND	20.0	14.7	73.4	20.0	16.3	81.5	10.4	55 - 130	20	
4-Chlorotoluene	ND	20.0	16.9	84.7	20.0	16.7	83.4	1.61	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	15.9	79.6	20.0	15.8	79	0.763	64 - 140	20	
Acetone	ND	20.0	16.2	80.8	20.0	16.8	84.2	4.05	40 - 180	20	
Benzene	ND	20.0	17.5	87.6	20.0	17.8	89	1.57	80 - 121	20	
Bromobenzene	ND	20.0	18.1	90.3	20.0	17.7	88.7	1.74	80 - 120	20	
Bromochloromethane	ND	20.0	20.8	104	20.0	18.4	91.9	12.3	65 - 130	20	
Bromodichloromethane	ND	20.0	19.2	96.1	20.0	18.3	91.3	5.11	80 - 131	20	
Bromoform	ND	20.0	19.1	95.3	20.0	18.3	91.3	4.34	70 - 130	20	
Bromomethane	ND	20.0	23.2	116	20.0	19.1	95.3	19.6	30 - 145	20	
Carbon disulfide	ND	20.0	16.6	82.8	20.0	17.7	88.4	6.56	58 - 128	20	
Carbon tetrachloride	ND	20.0	21.5	108	20.0	19.0	94.8	12.7	65 - 140	20	
Chlorobenzene	ND	20.0	17.3	86.4	20.0	17.1	85.3	1.29	80 - 120	20	
Chloroethane	ND	20.0	21.0	105	20.0	16.2	81.2	25.8	60 - 135	20	#
Chloroform	ND	20.0	20.2	101	20.0	17.8	89.1	12.8	80 - 125	20	
Chloromethane	ND	20.0	26.5	132	20.0	21.8	109	19.6	40 - 125	20	*
cis-1,2-Dichloroethene	0.654	20.0	21.5	104	20.0	18.8	90.9	13.1	70 - 125	20	

MS_MSD - Modified 03/06/2008

PDF File ID: 3437025

Report generated 03/26/2014 14:04

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14031100 Cal ID: HPMS8 08-MAR-14 Worknum: WG468027

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14031100-12 File ID: 8M395809 Dil: 1 Method: 5035A

Sample ID: L14031100-13 MS File ID: 8M395796 Dil: 1 Matrix: 8260B

Sample ID: L14031100-14 MSD File ID: 8M395797 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	18.9	94.5	20.0	18.5	92.7	1.91	70 - 130	20	
Chlorodibromomethane	ND	20.0	18.0	89.8	20.0	18.7	93.6	4.14	60 - 135	20	
Dibromomethane	ND	20.0	18.5	92.4	20.0	18.0	90	2.62	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	43.0	215	20.0	35.8	179	18.3	50 - 160	20	*
Ethylbenzene	ND	20.0	18.3	91.6	20.0	17.9	89.3	2.49	80 - 122	20	
Hexachlorobutadiene	ND	20.0	18.6	92.8	20.0	18.2	91.2	1.79	72 - 132	20	
Isopropylbenzene	ND	20.0	18.2	91.2	20.0	17.6	87.8	3.79	80 - 122	20	
m-,p-Xylene	ND	40.0	36.4	91.1	40.0	36.2	90.5	0.628	80 - 122	20	
Methylene chloride	ND	20.0	17.2	86.1	20.0	17.8	88.8	3.12	80 - 123	20	
n-Butylbenzene	ND	20.0	18.1	90.3	20.0	17.8	88.9	1.60	80 - 131	20	
n-Propylbenzene	ND	20.0	16.9	84.4	20.0	16.9	84.3	0.0173	80 - 129	20	
Naphthalene	ND	20.0	18.6	92.8	20.0	18.4	92.2	0.651	59 - 149	20	
o-Xylene	ND	20.0	17.4	86.9	20.0	17.0	85.2	1.95	80 - 122	20	
p-Isopropyltoluene	ND	20.0	17.2	86.2	20.0	17.1	85.7	0.484	80 - 122	20	
sec-Butylbenzene	ND	20.0	16.7	83.6	20.0	16.6	83.1	0.598	80 - 127	20	
Styrene	ND	20.0	19.1	95.5	20.0	18.9	94.3	1.20	80 - 123	20	
tert-Butylbenzene	ND	20.0	17.0	85	20.0	16.8	84.1	1.07	80 - 126	20	
Tetrachloroethene	ND	20.0	17.1	85.7	20.0	17.4	86.9	1.41	80 - 124	20	
Toluene	ND	20.0	16.6	82.8	20.0	18.0	90.2	8.56	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	17.9	89.4	20.0	18.0	90.1	0.723	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	15.6	78.2	20.0	16.6	83.2	6.19	80 - 130	20	*
Trichloroethene	73.3	20.0	76.3	14.8	20.0	75.5	10.8	1.06	80 - 122	20	*
Trichlorofluoromethane	ND	20.0	23.4	117	20.0	21.2	106	10.0	62 - 151	20	
Vinyl acetate	ND	20.0	21.6	108	20.0	20.4	102	5.61	10 - 190	20	
Vinyl chloride	ND	20.0	26.2	131	20.0	21.6	108	19.3	50 - 170	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3437025

Report generated 03/26/2014 14:04

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14031100 Cal ID:HPMS8- 08-MAR-14 Worknum:WG468417

Instrument ID:HPMS8 Contract #: Prep Method:5030B/5030C/

Parent ID:L14031100-29 File ID:8M395879 Dil:1 Method:5035A

Sample ID:L14031100-30 MS File ID:8M395875 Dil:1 Matrix:8260B

Sample ID:L14031100-31 MSD File ID:8M395876 Dil:1 Units:Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	17.3	86.4	20.0	17.6	88.2	2.07	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	18.7	93.6	20.0	19.4	96.9	3.38	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	15.7	78.4	20.0	15.9	79.5	1.38	79 - 125	20	*
1,1,2-Trichloroethane	ND	20.0	16.8	84	20.0	17.5	87.5	3.99	80 - 125	20	
1,1-Dichloroethane	ND	20.0	17.2	86	20.0	17.6	87.9	2.21	80 - 125	20	
1,1-Dichloroethene	ND	20.0	17.2	85.8	20.0	17.6	88.1	2.59	80 - 132	20	
1,1-Dichloropropene	ND	20.0	17.8	89.1	20.0	18.3	91.7	2.83	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	17.8	89.2	20.0	18.2	91	1.97	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	16.3	81.3	20.0	16.1	80.5	1.01	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	18.2	90.8	20.0	18.8	94.1	3.54	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	18.7	93.7	20.0	18.7	93.7	0.0148	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	15.0	74.9	20.0	15.3	76.3	1.88	50 - 130	20	
1,2-Dibromoethane	ND	20.0	16.9	84.5	20.0	17.5	87.3	3.29	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	16.5	82.5	20.0	16.7	83.4	1.11	80 - 125	20	
1,2-Dichloroethane	ND	20.0	17.1	85.7	20.0	17.9	89.4	4.26	80 - 129	20	
1,2-Dichloropropane	ND	20.0	17.4	87.1	20.0	17.9	89.7	2.95	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	19.3	96.3	20.0	19.6	97.8	1.52	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	16.7	83.7	20.0	17.1	85.6	2.24	80 - 120	20	
1,3-Dichloropropane	ND	20.0	16.0	79.8	20.0	16.8	84.2	5.35	80 - 120	20	*
1,4-Dichlorobenzene	ND	20.0	17.4	87.1	20.0	17.7	88.4	1.49	80 - 120	20	
2,2-Dichloropropane	ND	20.0	18.3	91.6	20.0	18.7	93.6	2.09	80 - 133	20	
2-Butanone	ND	20.0	15.7	78.7	20.0	15.8	78.8	0.169	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	17.1	85.5	20.0	17.8	88.8	3.74	80 - 127	20	
2-Hexanone	ND	20.0	15.3	76.7	20.0	16.0	80	4.27	55 - 130	20	
4-Chlorotoluene	ND	20.0	16.6	82.9	20.0	16.3	81.5	1.63	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	15.0	75	20.0	15.8	78.9	5.14	64 - 140	20	
Acetone	ND	20.0	16.5	82.7	20.0	15.9	79.3	4.12	40 - 180	20	
Benzene	ND	20.0	17.9	89.4	20.0	18.5	92.3	3.23	80 - 121	20	
Bromobenzene	ND	20.0	17.7	88.5	20.0	18.0	90	1.70	80 - 120	20	
Bromochloromethane	ND	20.0	18.0	89.8	20.0	18.1	90.6	0.897	65 - 130	20	
Bromodichloromethane	ND	20.0	18.0	89.8	20.0	18.3	91.6	1.97	80 - 131	20	
Bromoform	ND	20.0	17.2	86.2	20.0	17.8	89.2	3.34	70 - 130	20	
Bromomethane	ND	20.0	21.2	106	20.0	21.8	109	2.77	30 - 145	20	
Carbon disulfide	ND	20.0	17.7	88.5	20.0	17.8	88.9	0.410	58 - 128	20	
Carbon tetrachloride	ND	20.0	18.7	93.3	20.0	19.4	97.2	4.08	65 - 140	20	
Chlorobenzene	ND	20.0	16.7	83.4	20.0	17.2	85.8	2.86	80 - 120	20	
Chloroethane	ND	20.0	18.0	90.1	20.0	18.5	92.4	2.57	60 - 135	20	
Chloroform	ND	20.0	17.8	88.9	20.0	18.2	91.2	2.58	80 - 125	20	
Chloromethane	ND	20.0	22.1	110	20.0	22.7	113	2.78	40 - 125	20	
cis-1,2-Dichloroethene	ND	20.0	18.7	93.3	20.0	18.9	94.6	1.48	70 - 125	20	

MS_MSD - Modified 03/06/2008

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14031100 Cal ID: HPMS8 08-MAR-14 Worknum: WG468417

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14031100-29 File ID: 8M395879 Dil: 1 Method: 5035A

Sample ID: L14031100-30 MS File ID: 8M395875 Dil: 1 Matrix: 8260B

Sample ID: L14031100-31 MSD File ID: 8M395876 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	18.6	93.1	20.0	18.9	94.7	1.75	70 - 130	20	
Chlorodibromomethane	ND	20.0	17.8	89	20.0	18.1	90.4	1.55	60 - 135	20	
Dibromomethane	ND	20.0	17.4	86.8	20.0	17.9	89.3	2.82	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	31.6	158	20.0	32.6	163	2.86	50 - 160	20	*
Ethylbenzene	ND	20.0	18.0	89.9	20.0	18.3	91.6	1.88	80 - 122	20	
Hexachlorobutadiene	ND	20.0	18.4	92	20.0	18.4	92.2	0.293	72 - 132	20	
Isopropylbenzene	ND	20.0	17.2	86.2	20.0	17.8	89.2	3.35	80 - 122	20	
m-,p-Xylene	ND	40.0	35.6	89.1	40.0	36.5	91.2	2.27	80 - 122	20	
Methylene chloride	ND	20.0	17.7	88.6	20.0	17.9	89.6	1.13	80 - 123	20	
n-Butylbenzene	ND	20.0	18.3	91.6	20.0	18.5	92.4	0.895	80 - 131	20	
n-Propylbenzene	ND	20.0	16.9	84.5	20.0	17.1	85.6	1.26	80 - 129	20	
Naphthalene	ND	20.0	17.4	86.9	20.0	17.7	88.5	1.83	59 - 149	20	
o-Xylene	ND	20.0	16.6	83	20.0	17.3	86.7	4.29	80 - 122	20	
p-Isopropyltoluene	ND	20.0	17.3	86.4	20.0	17.6	87.9	1.71	80 - 122	20	
sec-Butylbenzene	ND	20.0	16.8	84.2	20.0	17.0	85.2	1.17	80 - 127	20	
Styrene	ND	20.0	18.7	93.3	20.0	19.2	96.1	3.01	80 - 123	20	
tert-Butylbenzene	ND	20.0	16.6	83.1	20.0	17.3	86.3	3.77	80 - 126	20	
Tetrachloroethene	1.24	20.0	17.8	82.8	20.0	18.4	86	3.58	80 - 124	20	
Toluene	ND	20.0	17.9	89.3	20.0	18.4	92	3.05	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	18.2	91.1	20.0	18.7	93.5	2.57	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	16.3	81.3	20.0	16.3	81.7	0.470	80 - 130	20	
Trichloroethene	0.349	20.0	18.4	90.5	20.0	18.8	92.1	1.78	80 - 122	20	
Trichlorofluoromethane	ND	20.0	21.3	107	20.0	21.9	110	2.68	62 - 151	20	
Vinyl acetate	ND	20.0	19.6	97.9	20.0	20.0	100	2.36	10 - 190	20	
Vinyl chloride	ND	20.0	21.6	108	20.0	22.0	110	1.95	50 - 170	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3437025

Report generated 03/26/2014 14:04

METHOD BLANK SUMMARY

Login Number: L14031100
Blank File ID: T1.033114.103718
Prep Date: 03/27/14 12:59
Analyzed Date: 03/31/14 10:37
Analyst: PDM

Work Group: WG469156
Blank Sample ID: WG468873-02
Instrument ID: ICP-THERMO1
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG468873-03	T1.033114.104107	03/31/14 10:41	01
35BWW08	L14031100-01	T1.033114.104443	03/31/14 10:44	01
MW 1-1	L14031100-02	T1.033114.105554	03/31/14 10:55	01
MW 1-2	L14031100-03	T1.033114.105942	03/31/14 10:59	01
FIELD BLANK 11 MARCH 2014	L14031100-04	T1.033114.110526	03/31/14 11:05	01
MW 1-3	L14031100-05	T1.033114.110914	03/31/14 11:09	01
35B WW10	L14031100-06	T1.033114.111300	03/31/14 11:13	01
MW 2-1	L14031100-07	T1.033114.112414	03/31/14 11:24	01
MW 2-1D	L14031100-08	T1.033114.112800	03/31/14 11:28	01
MW 2-2	L14031100-10	T1.033114.113148	03/31/14 11:31	01
MW 2-3	L14031100-11	T1.033114.113532	03/31/14 11:35	01
35B WW09	L14031100-12	T1.033114.113920	03/31/14 11:39	01
35B WW09 MS	L14031100-13	T1.033114.114306	03/31/14 11:43	01
35B WW09 MSD	L14031100-14	T1.033114.114643	03/31/14 11:46	01
MW 3-1	L14031100-15	T1.033114.115018	03/31/14 11:50	01
MW 3-2	L14031100-16	T1.033114.115405	03/31/14 11:54	01
MW 3-3	L14031100-19	T1.033114.115754	03/31/14 11:57	01
35B WW04	L14031100-20	T1.033114.120912	03/31/14 12:09	01
MW 58	L14031100-21	T1.033114.121300	03/31/14 12:13	01
35B WW03	L14031100-22	T1.033114.121648	03/31/14 12:16	01
MW 4-1	L14031100-23	T1.033114.122036	03/31/14 12:20	01
SW-2	L14031100-25	T1.033114.122423	03/31/14 12:24	01
SW-1	L14031100-26	T1.033114.122810	03/31/14 12:28	01

Report Name: BLANK_SUMMARY
PDF File ID: 3449910
Report generated 03/31/2014 13:21

METHOD BLANK SUMMARY

Login Number: L14031100
Work Group: WG469157
Blank File ID: T2.040114.134036
Blank Sample ID: WG468893-02
Prep Date: 03/27/14 13:59
Instrument ID: ICP-THERMO2
Analyzed Date: 04/01/14 13:40
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG468893-03	T2.040114.134407	04/01/14 13:44	01
35BWW17	L14031100-29	T2.040114.134721	04/01/14 13:47	01
35BWW17 MS	L14031100-30	T2.040114.135047	04/01/14 13:50	01
35BWW17 MSD	L14031100-31	T2.040114.135400	04/01/14 13:54	01
MW 4-2	L14031100-27	T2.040114.142817	04/01/14 14:28	01
MW 4-3	L14031100-28	T2.040114.143145	04/01/14 14:31	01
35BWW05	L14031100-32	T2.040114.143512	04/01/14 14:35	01
35BWW05D	L14031100-33	T2.040114.143840	04/01/14 14:38	01
FIELD BLANK 18 MARCH 2014	L14031100-34	T2.040114.144206	04/01/14 14:42	01
35BWW06	L14031100-35	T2.040114.144537	04/01/14 14:45	01

Report Name: BLANK_SUMMARY
PDF File ID: 3453796
Report generated 04/02/2014 11:05

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14031100 Prep Date:03/27/14 12:59 Sample ID:WG468873-02
Instrument ID:ICP-THERMO1 Run Date:03/31/14 10:37 Prep Method:3015
File ID:T1.033114.103718 Analyst:PDM Method:6010B
Workgroup (AAB#):WG469156 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-TH-31-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3449911
31-MAR-2014 13:21

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14031100 Prep Date: 03/27/14 13:59 Sample ID: WG468893-02
Instrument ID: ICP-THERMO2 Run Date: 04/01/14 13:40 Prep Method: 3015
File ID: T2.040114.134036 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG469157 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-01-APR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3453797
02-APR-2014 11:05

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14031100 Run Date: 03/31/2014 Sample ID: WG468873-03
Instrument ID: ICP-THERMO1 Run Time: 10:41 Prep Method: 3015
File ID: T1.033114.104107 Analyst: PDM Method: 6010B
Workgroup (AAB#): WG469156 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD63274 Cal ID: ICP-TH-31-MAR-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.11	97.8	85 - 115	
Calcium, Total	6.25	6.23	99.8	85 - 115	
Iron, Total	2.50	2.45	98.1	85 - 115	
Magnesium, Total	6.25	6.13	98.1	85 - 115	
Potassium, Total	31.3	30.7	98.1	85 - 115	
Sodium, Total	31.3	30.5	97.7	85 - 115	
Strontium, Total	0.625	0.613	98.0	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3449912
Report generated: 03/31/2014 13:21

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14031100 Run Date: 04/01/2014 Sample ID: WG468893-03
Instrument ID: ICP-THERMO2 Run Time: 13:44 Prep Method: 3015
File ID: T2.040114.134407 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG469157 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD63274 Cal ID: ICP-TH-01-APR-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.43	103	85 - 115	
Calcium, Total	6.25	6.40	102	85 - 115	
Iron, Total	2.50	2.57	103	85 - 115	
Magnesium, Total	6.25	6.20	99.2	85 - 115	
Potassium, Total	31.3	31.6	101	85 - 115	
Sodium, Total	31.3	32.0	102	85 - 115	
Strontium, Total	0.625	0.638	102	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3453798
Report generated: 04/02/2014 11:05

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14031100 Cal ID: ICP-THERMO1- 31-MAR-14 Worknum:WG469156

Instrument ID:ICP-THERMO1 Contract #: Prep Method:3015

Parent ID:L14031100-12 File ID:T1.033114.113920 Dil:1 Method:6010B

Sample ID:L14031100-13 MS File ID:T1.033114.114306 Dil:1 Matrix:Water

Sample ID:L14031100-14 MSD File ID:T1.033114.114643 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	5.95	95.2	6.25	5.91	94.5	0.774	80 - 120	20	
Calcium, Total	45.5	6.25	51.0	86.7	6.25	51.7	98	1.38	80 - 120	20	
Iron, Total	ND	2.50	2.42	96.7	2.50	2.36	94.3	2.52	80 - 120	20	
Magnesium, Total	24.9	6.25	30.2	84.5	6.25	30.6	90.1	1.14	80 - 120	20	
Potassium, Total	2.02	31.3	31.9	95.7	31.3	31.7	95	0.739	80 - 120	20	
Sodium, Total	149	31.3	176	86.8	31.3	178	94.5	1.35	80 - 120	20	
Strontium, Total	1.43	0.625	2.00	91.1	0.625	2.01	93.2	0.637	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3449913

Report generated 03/31/2014 13:21

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14031100 Cal ID: ICP-THERMO2- 01-APR-14 Worknum:WG469157

Instrument ID:ICP-THERMO2 Contract #: Prep Method:3015

Parent ID:L14031100-29 File ID:T2.040114.134721 Dil:1 Method:6010B

Sample ID:L14031100-30 MS File ID:T2.040114.135047 Dil:1 Matrix:Water

Sample ID:L14031100-31 MSD File ID:T2.040114.135400 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	4.82	6.25	11.6	108	6.25	12.9	130	10.9	80 - 120	20	*
Calcium, Total	2.06	6.25	8.21	98.4	6.25	8.06	96.1	1.75	80 - 120	20	
Iron, Total	13.0	2.50	13.9	32.7	2.50	15.5	97.7	11.1	80 - 120	20	*
Magnesium, Total	1.49	6.25	7.46	95.5	6.25	7.41	94.8	0.614	80 - 120	20	
Potassium, Total	5.18	31.3	35.6	97.3	31.3	35.0	95.3	1.85	80 - 120	20	
Sodium, Total	21.2	31.3	52.0	98.7	31.3	51.6	97.3	0.845	80 - 120	20	
Strontium, Total	0.0627	0.625	0.683	99.3	0.625	0.674	97.7	1.41	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3453799

Report generated 04/02/2014 11:05

METHOD BLANK SUMMARY

Login Number: L14031100
Work Group: WG469179
Blank File ID: NI.033114.101249
Blank Sample ID: WG468952-02
Prep Date: 03/28/14 07:24
Instrument ID: ICP-MS2
Analyzed Date: 03/31/14 10:12
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG468952-03	NI.033114.101557	03/31/14 10:15	01
35B WW09	L14031100-12	NI.033114.101904	03/31/14 10:19	01
35B WW09 MS	L14031100-13	NI.033114.102212	03/31/14 10:22	01
35B WW09 MSD	L14031100-14	NI.033114.102520	03/31/14 10:25	01
35BWW08	L14031100-01	NI.033114.102828	03/31/14 10:28	01
MW 1-1	L14031100-02	NI.033114.103136	03/31/14 10:31	01
MW 1-2	L14031100-03	NI.033114.105134	03/31/14 10:51	01
FIELD BLANK 11 MARCH 2014	L14031100-04	NI.033114.105442	03/31/14 10:54	01
MW 1-3	L14031100-05	NI.033114.105750	03/31/14 10:57	01
35B WW10	L14031100-06	NI.033114.110058	03/31/14 11:00	01
MW 2-1	L14031100-07	NI.033114.110406	03/31/14 11:04	01
MW 2-1D	L14031100-08	NI.033114.110713	03/31/14 11:07	01
MW 2-2	L14031100-10	NI.033114.111021	03/31/14 11:10	01
MW 2-3	L14031100-11	NI.033114.111329	03/31/14 11:13	01
MW 3-1	L14031100-15	NI.033114.111637	03/31/14 11:16	01
MW 3-2	L14031100-16	NI.033114.111945	03/31/14 11:19	01
MW 2-2	L14031100-10	NI.033114.113003	03/31/14 11:30	DL01
MW 3-3	L14031100-19	NI.033114.122240	03/31/14 12:22	01
35B WW04	L14031100-20	NI.033114.122548	03/31/14 12:25	01
MW 58	L14031100-21	NI.033114.122856	03/31/14 12:28	01
35B WW03	L14031100-22	NI.033114.123203	03/31/14 12:32	01
MW 4-1	L14031100-23	NI.033114.123511	03/31/14 12:35	01
SW-2	L14031100-25	NI.033114.123819	03/31/14 12:38	01
SW-1	L14031100-26	NI.033114.124127	03/31/14 12:41	01
MW 1-2	L14031100-03	NI.033114.125101	03/31/14 12:51	02
FIELD BLANK 11 MARCH 2014	L14031100-04	NI.033114.125408	03/31/14 12:54	02
MW 1-3	L14031100-05	NI.033114.125716	03/31/14 12:57	02
35B WW10	L14031100-06	NI.033114.130024	03/31/14 13:00	02
MW 2-1	L14031100-07	NI.033114.130332	03/31/14 13:03	02
MW 2-1D	L14031100-08	NI.033114.130640	03/31/14 13:06	02
MW 3-1	L14031100-15	NI.033114.144540	03/31/14 14:45	02
MW 2-2	L14031100-10	NI.040114.125417	04/01/14 12:54	03
MW 2-3	L14031100-11	NI.040114.125725	04/01/14 12:57	03
MW 3-2	L14031100-16	NI.040114.130033	04/01/14 13:00	03
MW 4-1	L14031100-23	NI.040114.130341	04/01/14 13:03	DL02

Report Name: BLANK_SUMMARY
PDF File ID: 3450978
Report generated 04/02/2014 11:12

METHOD BLANK SUMMARY

Login Number: L14031100
Work Group: WG469181
Blank File ID: NI.033114.170626
Blank Sample ID: WG468963-03
Prep Date: 03/28/14 08:34
Instrument ID: ICP-MS2
Analyzed Date: 03/31/14 17:06
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG468963-04	NI.033114.170934	03/31/14 17:09	01
35BWW17	L14031100-29	NI.033114.171242	03/31/14 17:12	01
35BWW17 MS	L14031100-30	NI.033114.171550	03/31/14 17:15	01
35BWW17 MSD	L14031100-31	NI.033114.171858	03/31/14 17:18	01
MW 4-2	L14031100-27	NI.033114.172206	03/31/14 17:22	01
MW 4-3	L14031100-28	NI.033114.172514	03/31/14 17:25	01
35BWW05	L14031100-32	NI.033114.174403	03/31/14 17:44	01
35BWW05D	L14031100-33	NI.033114.174711	03/31/14 17:47	01
FIELD BLANK 18 MARCH 2014	L14031100-34	NI.033114.175019	03/31/14 17:50	01
35BWW06	L14031100-35	NI.033114.175327	03/31/14 17:53	01
DUP	WG468963-07	NI.033114.184340	03/31/14 18:43	01

Report Name: BLANK_SUMMARY
PDF File ID: 3450978
Report generated 04/02/2014 11:12

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14031100 Prep Date:03/28/14 07:24 Sample ID:WG468952-02
Instrument ID:ICP-MS2 Run Date:03/31/14 10:12 Prep Method:3015
File ID:NI.033114.101249 Analyst:JYH Method:6020
Workgroup (AAB#):WG469179 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-MS-31-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3450979
02-APR-2014 11:12

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14031100 Prep Date: 03/28/14 08:34 Sample ID: WG468963-03
Instrument ID: ICP-MS2 Run Date: 03/31/14 17:06 Prep Method: 3015
File ID: NI.033114.170626 Analyst: JYH Method: 6020
Workgroup (AAB#): WG469181 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-31-MAR-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3450979
02-APR-2014 11:12

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14031100 Run Date: 03/31/2014 Sample ID: WG468952-03
Instrument ID: ICP-MS2 Run Time: 10:15 Prep Method: 3015
File ID: NI.033114.101557 Analyst: JYH Method: 6020
Workgroup (AAB#): WG469179 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD62325 Cal ID: ICP-MS - 31-MAR-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0659	105	80 - 120	
Barium, Total	0.0625	0.0632	101	80 - 120	
Cadmium, Total	0.0625	0.0638	102	80 - 120	
Chromium, Total	0.0625	0.0641	102	80 - 120	
Copper, Total	0.0625	0.0672	108	80 - 120	
Lead, Total	0.0625	0.0642	103	80 - 120	
Manganese, Total	0.0625	0.0637	102	80 - 120	
Nickel, Total	0.0625	0.0731	117	80 - 120	
Selenium, Total	0.0625	0.0648	104	80 - 120	
Thallium, Total	0.0625	0.0633	101	80 - 120	
Vanadium, Total	0.0625	0.0642	103	80 - 120	
Zinc, Total	0.0625	0.0666	107	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3450980
Report generated: 04/02/2014 11:12

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14031100 Run Date: 03/31/2014 Sample ID: WG468963-04
Instrument ID: ICP-MS2 Run Time: 17:09 Prep Method: 3015
File ID: NI.033114.170934 Analyst: JYH Method: 6020
Workgroup (AAB#): WG469181 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD62325 Cal ID: ICP-MS-31-MAR-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0612	97.9	80 - 120	
Barium, Total	0.0625	0.0590	94.5	80 - 120	
Cadmium, Total	0.0625	0.0598	95.7	80 - 120	
Chromium, Total	0.0625	0.0600	96.0	80 - 120	
Copper, Total	0.0625	0.0637	102	80 - 120	
Lead, Total	0.0625	0.0611	97.7	80 - 120	
Manganese, Total	0.0625	0.0620	99.2	80 - 120	
Nickel, Total	0.0625	0.0612	97.9	80 - 120	
Selenium, Total	0.0625	0.0608	97.3	80 - 120	
Thallium, Total	0.0625	0.0605	96.8	80 - 120	
Vanadium, Total	0.0625	0.0608	97.2	80 - 120	
Zinc, Total	0.0625	0.0619	99.0	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3450980
Report generated: 04/02/2014 11:12

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14031100 Cal ID: ICP-MS2- 31-MAR-14 Worknum:WG469179

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L14031100-12 File ID:NI.033114.101904 Dil:1 Method:6020

Sample ID:L14031100-13 MS File ID:NI.033114.102212 Dil:1 Matrix:Water

Sample ID:L14031100-14 MSD File ID:NI.033114.102520 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0654	105	0.0625	0.0660	106	0.820	75 - 125	20	
Barium, Total	0.0416	0.0625	0.102	96.9	0.0625	0.103	97.9	0.605	75 - 125	20	
Cadmium, Total	0.000467	0.0625	0.0639	101	0.0625	0.0645	102	0.939	75 - 125	20	
Chromium, Total	ND	0.0625	0.0619	99	0.0625	0.0618	98.8	0.145	75 - 125	20	
Copper, Total	0.00184	0.0625	0.0640	99.5	0.0625	0.0656	102	2.48	75 - 125	20	
Lead, Total	ND	0.0625	0.0641	103	0.0625	0.0646	103	0.739	75 - 125	20	
Manganese, Total	0.0152	0.0625	0.0749	95.5	0.0625	0.0757	96.9	1.11	75 - 125	20	
Nickel, Total	ND	0.0625	0.0637	102	0.0625	0.0652	104	2.25	75 - 125	20	
Selenium, Total	0.00399	0.0625	0.0708	107	0.0625	0.0735	111	3.74	75 - 125	20	
Thallium, Total	0.000109	0.0625	0.0637	102	0.0625	0.0656	105	2.92	75 - 125	20	
Vanadium, Total	0.000779	0.0625	0.0667	105	0.0625	0.0672	106	0.748	75 - 125	20	
Zinc, Total	ND	0.0625	0.0733	117	0.0625	0.0748	120	1.96	75 - 125	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3450981

Report generated 04/02/2014 11:12

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14031100 Cal ID: ICP-MS2- 31-MAR-14 Worknum:WG469181

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L14031100-29 File ID:NI.033114.171242 Dil:1 Method:6020

Sample ID:L14031100-30 MS File ID:NI.033114.171550 Dil:1 Matrix:Water

Sample ID:L14031100-31 MSD File ID:NI.033114.171858 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0336	53.7	0.0625	0.0375	60	11.1	75 - 125	20	*
Barium, Total	0.0837	0.0625	0.135	82.9	0.0625	0.138	86.3	1.58	75 - 125	20	
Cadmium, Total	0.00128	0.0625	0.0560	87.5	0.0625	0.0586	91.7	4.64	75 - 125	20	
Chromium, Total	0.00979	0.0625	0.0643	87.2	0.0625	0.0671	91.7	4.33	75 - 125	20	
Copper, Total	0.00675	0.0625	0.0642	91.9	0.0625	0.0656	94.2	2.22	75 - 125	20	
Lead, Total	0.00571	0.0625	0.0620	90	0.0625	0.0642	93.6	3.55	75 - 125	20	
Manganese, Total	0.0564	0.0625	0.105	78.4	0.0625	0.111	86.7	4.81	75 - 125	20	
Nickel, Total	0.0126	0.0625	0.0682	88.9	0.0625	0.0703	92.3	3.10	75 - 125	20	
Selenium, Total	0.00118	0.0625	0.0530	82.9	0.0625	0.0550	86.1	3.77	75 - 125	20	
Thallium, Total	0.000126	0.0625	0.0567	90.6	0.0625	0.0590	94.2	3.86	75 - 125	20	
Vanadium, Total	0.0102	0.0625	0.0658	89	0.0625	0.0679	92.4	3.20	75 - 125	20	
Zinc, Total	0.0462	0.0625	0.222	282	0.0625	0.123	122	57.9	75 - 125	20	*#

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3450981

Report generated 04/02/2014 11:12

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
April 3, 2014

001 - BIO-CHEM TESTING WVDEP 220
002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental
004 - MICROBAC PITTSBURGH
005 - ES LABORATORIES
006 - ALCOSAN LABORATORIES
007 - ALS LABORATORIES
008 - BENCHMARK LABORATORIES
010 - MICROBAC CHICAGOLAND
ADC - ANTHONY D. CANTER
ADG - APRIL D. GREENE
AWE - ANDREW W. ESSIG
AZH - AFTER HOURS
BAF - BRICE A. FENTON
BJO - BRIAN J. OGDEN
BKT - BRENDAN TORRENCE
BLG - BRENDA L. GREENWALT
BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES
CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS
CSH - CHRIS S. HILL
DAK - DEAN A. K
DCM - DAVID C. MERCKLE
DEV - DAVID E. VANDENBERG
DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE
DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON
ENY - EMILY N. YOAK
EPT - ETHAN P. TIDD
ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN
JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON
JDS - JARED D. SMITH
JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KAJ - KELLIE A. JOHNSON
KDW - KATHRYN D. WELCH
KEB - KATIE E. BARNES
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
KRB - KAELY R. BECKER
KRP - KATHY R. PARSONS
LKN - LINDA K. NEDEFF
LLS - LARRY L. STEPHENS
LSB - LESLIE S. BUCINA
MBK - MORGAN B. KNOWLTON
MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING
MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE
PSW - PEGGY S. WEBB
QX - QIN XU
RAH - ROY A. HALSTEAD
REK - BOB E. KYER
RLB - BOB BUCHANAN
RM - RAYMOND MALEKE
RNP - RICK N. PETTY
RS - ROSEMARY SCOTT
SAV - SARAH A. VANDENBERG
SEP - SUZANNE J. PAUGH
SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF
TLC - TYLER L. CORDELL
TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS
TPA - TYLER P. AMRINE
VC - VICKI COLLIER
WJB - WILL J. BEASLEY
WRR - WESLEY R. RICHARDS
WTD - WADE T. DELONG
XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
April 03, 2014

Qualkey: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
CT1	The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated value; the analyte concentration was less than the RL/LOQ.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, H1	Not detected; Sample analysis performed past holding time.
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 37723

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GEAR FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 3083,001/B66450

Sampler (print): CARL JOHNSON JR | Signature: Carl Johnson Jr

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)
35B WW08		X	11 MARCH 2014	1050	GW	4	S	3	1	
MW 1-1		X	11 MARCH 2014	1150	GW	4	S	3	1	
MW 1-2		X	11 MARCH 2014	1430	GW	4	S	3	1	
FIELD BLANK 11 MARCH 2014		X	11 MARCH 2014	1300	GW	4	S	3	1	
MW 1-3		X	11 MARCH 2014	1530	GW	4	S	3	1	
35B WW10		X	12 March 2014	0915	GW	4	S	3	1	
MW2-1		X	12 March 2014	1120	GW	4	S	3	1	
MW2-1 D		X	12 March 2014	1130	GW	4	S	3	1	
TRIP BLANK 12 MARCH 2014		X	12 March 2014	—	TRIP BLANK	2	S	2	—	
MW 2-2		X	12 March 2014	1330	GW	4	S	3	1	
MW 2-3		X	12 March 2014	1500	GW	4	S	3	1	
35B WW09		X	13 MARCH 2014	0900	GW	4	S	3	1	
35B WW09MS		X	13 March 2014	0910	GW	4	S	3	1	
35B WW09MSD		X	13 March 2014	0920	GW	4	S	3	1	
MW 3-1		X	13 March 2014	1215	GW	4	S	3	1	
MW 3-2		X	13 March 2014	1515	GW	4	S	3	1	
TRIP BLANK 13 MARCH 2014		X	13 March 2014	—	TRIP BLANK	2	S	2	—	
TRIP BLANK 14 MARCH 2014		X	14 March 2014	—	TRIP BLANK	2	S	2	—	
MW 3-3		X	14 March 2014	0910	GW	4	S	3	1	
35B WW04		X	14 March 2014	1010	GW	4	S	3	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Received by: (Signature)
Carl Johnson Jr	3-19-2014					
Relinquished by: (Signature)	Date	Time	Received by: (Signature)			Remarks:

Microbac OVD
Received: 03/20/2014 10:41
By: ROSEMARY SCOTT 221000051241

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00838725

COC No. A 37724

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 3083.00 / B66490

Sampler (print): CARL JOHNSON JR | Signature:

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	Metals	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MW-58		X	14 MARCH 2014	1110	GW	4	S	3	1		
35BWW03		X	"	1310	GW	4	S	3	1		
MW 4-1		X	17 March 2014	0930	GW	4	S	3	1		
TRIP BLANK 17 MARCH 2014		X	17 MARCH 2014	-	TRIP BLANK	2	S	2	-		
SW-2		X	17 MARCH 2014	0845	SURFACE WATER	4	S	3	1		
SW-1		X	17 MARCH 2014	0900	SURFACE WATER	4	S	3	1		
MW 4-2		X	17 March 2014	1115	GW	4	S	3	1		
MW 4-3		X	17 March 2014	1300	GW	4	S	3	1		
35BWW17		X	17 MARCH 2014	1415	GW	4	S	3	1		
35BWW17MS		X	17 MARCH 2014	1430	GW	4	S	3	1		
35BWW17MSD		X	17 March 2014	1445	GW	4	S	3	1		
35BWW05		X	18 MARCH 2014	0915	GW	4	S	3	1		
35BWW05D		X	18 March 2014	0930	GW	4	S	3	1		
FIELD BLANK 18 MARCH 2014		X	18 MARCH 2014	0830	GW	4	S	3	1		
35BWW06		X	18 March 2014	1050	GW	4	S	3	1		

Relinquished by: (Signature)	Date	Time	Received by:	Relinquished by:	Date	Time	Received by: (Signature)
	3-19-2014		Microbac OVD Received: 03/20/2014 10:41 By: ROSEMARY SCOTT 221000051241				
Relinquished by: (Signature)	Date	Time					

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00838726

NELAP Addendum - November 13, 2013

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Nitroguanidine
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL KNITRO-C-WUV-VIS

Nitrocellulose

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL HPLCOS-HPLC-UV

Nitroguanidine

OVL KNITRO-C-S/UV-VIS

Nitrocellulose

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L14071368

Gene Fabian
Aberdeen Test Center
US Army Aberdeen Center
Aberdeen Proving Ground, MD 21005

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Kathy Albertson – Team Chemist/Data Specialist
(740) 373-4071
Kathy.Albertson@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on August 14 2014

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: Microbac OVD

Microbac

Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
0019753	I	2.0		1015923823460004575000780050036609	X
0018980	I	1.0		1002239523460004575000804245438415	X
0019752	I	3.0		1015923823460004575000780050036594	X
0018912	I	2.0		1015923823460004575000780050036610	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MW 1-1	L14071368-01	07/15/2014 10:45	07/24/2014 10:18
MW 1-1 D	L14071368-02	07/15/2014 11:00	07/24/2014 10:18
MW 1-2	L14071368-03	07/15/2014 14:30	07/24/2014 10:18
MW 1-3	L14071368-04	07/15/2014 16:00	07/24/2014 10:18
MW 2-1	L14071368-05	07/16/2014 09:35	07/24/2014 10:18
MW 2-1 MS	L14071368-06	07/16/2014 09:45	07/24/2014 10:18
MW 2-1 MSD	L14071368-07	07/16/2014 09:55	07/24/2014 10:18
MW 2-2	L14071368-08	07/16/2014 11:15	07/24/2014 10:18
MW 2-3	L14071368-09	07/16/2014 13:00	07/24/2014 10:18
35BWW10	L14071368-10	07/16/2014 15:53	07/24/2014 10:18
TRIP BLANK 16JUL2014	L14071368-11	07/16/2014 00:01	07/24/2014 10:18
MW 3-1	L14071368-12	07/17/2014 12:25	07/24/2014 10:18
FIELD BLANK 17JUL2014	L14071368-13	07/17/2014 08:40	07/24/2014 10:18
MW 3-2	L14071368-14	07/17/2014 15:40	07/24/2014 10:18
TRIP BLANK	L14071368-15	07/17/2014 00:01	07/24/2014 10:18
MW 3-3	L14071368-16	07/18/2014 09:15	07/24/2014 10:18
35BWW04	L14071368-17	07/18/2014 09:30	07/24/2014 10:18
TRIP BLANK 18JUL2014	L14071368-18	07/18/2014 00:01	07/24/2014 10:18
LHS MW-58	L14071368-19	07/18/2014 12:00	07/24/2014 10:18
LHS MW-58 D	L14071368-20	07/18/2014 12:15	07/24/2014 10:18
35BWW03	L14071368-21	07/18/2014 13:35	07/24/2014 10:18
MW 4-1	L14071368-22	07/21/2014 09:15	07/24/2014 10:18
MW 4-1 MS	L14071368-23	07/21/2014 09:30	07/24/2014 10:18
MW 4-1 MSD	L14071368-24	07/21/2014 09:40	07/24/2014 10:18
MW 4-2	L14071368-25	07/21/2014 11:10	07/24/2014 10:18
MW 4-3	L14071368-26	07/21/2014 14:05	07/24/2014 10:18
35BWW17	L14071368-27	07/21/2014 15:25	07/24/2014 10:18
35BWW09	L14071368-28	07/22/2014 08:30	07/24/2014 10:18
TRIP BLANK 22JUL2014	L14071368-29	07/22/2014 00:01	07/24/2014 10:18
35BWW08	L14071368-30	07/22/2014 09:55	07/24/2014 10:18
FIELD BLANK 22JUL2014	L14071368-31	07/22/2014 09:30	07/24/2014 10:18
35BWW05	L14071368-32	07/22/2014 11:40	07/24/2014 10:18
35BWW05 D	L14071368-33	07/22/2014 11:50	07/24/2014 10:18
35BWW06	L14071368-34	07/22/2014 13:30	07/24/2014 10:18

Microbac Laboratories
Case Narrative

Login Number: L14071368
Department: Volatiles
Analyst: Franci Bolden

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: The percent difference was out of range for the following analytes: trichlorofluoromethane, chloroethane, vinyl acetate, dichlorodifluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

Continuing Calibration and Tune: Recoveries out of range were observed for the following analytes: Chloroethane, Vinyl Acetate. Please see the applicable QC report for a detailed presentation of the failures.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Recoveries out of range were observed for the following analytes: Methylene chloride, 1,2-Dichloropropane, 2-Hexanone, Chloroethane, Chloromethane, Dichlorodifluoromethane, Trichlorofluoromethane. Please see the applicable QC report for a detailed presentation of the failures.

Matrix Spikes: Recoveries out of range were observed for the following analytes: tetrachloroethene, 4-chlorotoluene, 2-chloroethyl vinyl ether. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: Recoveries out of range were observed for the following analytes: 4-Bromofluorobenzene. Please see the applicable QC report for a detailed presentation of the failures.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

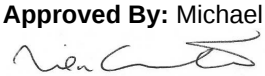
Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 86835
Approved By: Michael Albertson



Microbac Laboratories
Case Narrative

Login Number: L14071368
Department: Metals
Analyst: Kim Rhodes
Analyst #2: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG485928 - All acceptance criteria were met.

WG486151 - All acceptance criteria were met.

WG486326 - All acceptance criteria were met.

WG486423 - All acceptance criteria were met.

WG486616 - All acceptance criteria were met.

Matrix Spikes: WG485928 - Sample 05 was chosen by the client for MS/MSD analysis. Samples 06(MS) and 07(MSD) met all acceptance criteria.

WG486423 - Sample 22 was chosen by the client for MS/MSD analysis. Samples 23(MS) and 24(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 86748
Approved By: Sheri Pfalzgraf

Login Number: L14071368
Department: Metals
Analyst: Ji Hu
Analyst #2: Pierce Morris

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: WG486001 - The ICSA and ICSAB analyzed on 30-JUL-2014 at 16:27 and 16:30 were analyzed in the opposite of the customary order. The ICSA analyzed on 30-JUL-2014 at 16:30 yielded a result for zinc that exceeded the limit of detection. However, the sample yielded a result for zinc that was greater than ten times that in the ICSA. Therefore, the zinc result was reported with the permission of the program manager.

WG486021 - The ICSA and ICSAB analyzed on 30-JUL-2014 at 16:27 and 16:30 were analyzed in the opposite of the customary order.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG486021 - All acceptance criteria were met.

WG486001 - Due to a suspected pipetting error, the original post digestion spike analyzed on 29-JUL-2014 yielded recoveries that exceeded the upper control limit. Client sample 04 and the spike were reanalyzed for all analytes on a later calibration.

Matrix Spikes: WG486021 - Sample 22 was chosen by the client for MS/MSD analysis. Samples 23(MS) and 24(MSD) yielded a noncompliant recovery for zinc.

WG486001 - Sample 05 was chosen by the client for MS/MSD analysis. Samples 06(MS) and 07(MSD) yielded a noncompliant recovery for zinc.

SAMPLES

Samples: WG486021 - Client sample 24 required dilution analysis in order to obtain a result for manganese within the linear range. For consistancy with the MSD(24), the reference (22) and MS (23) were also reanalzyed at dilutions for manganese.

WG486001 - Client sample 08 required a dilution analysis in order to obtain a result for zinc within the linear range.

Narrative ID: 86806
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS11
Client ID:	MW 1-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	06/27/2014 20:09
Workgroup #:	WG485785	**Analyst:**	FJB	**Run Date:**	07/25/2014 21:10
Collect Date:	07/15/2014 10:45	**Dilution:**	1	**File ID:**	11M02721
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.937	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.0	86	118	
1,2-Dichloroethane-d4	101	80	120	
Toluene-d8	97.4	88	110	
4-Bromofluorobenzene	99.5	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-01 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW 1-1 **Prep Method:** 3015 **Prep Date:** 07/29/2014 08:45
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 07/30/2014 08:51
Workgroup #: WG486151 **Analyst:** KHR **Run Date:** 07/30/2014 11:33
Collect Date: 07/15/2014 10:45 **Dilution:** 1 **File ID:** T2.073014.113351
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	9.49		0.500	0.250
Iron, Total	7439-89-6	0.266		0.100	0.0500
Magnesium, Total	7439-95-4	5.06		0.500	0.250
Potassium, Total	7440-09-7	0.953	J	1.00	0.500
Sodium, Total	7440-23-5	85.5		0.500	0.250
Strontium, Total	7440-24-6	0.338		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-01 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 1-1 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 15:21
Collect Date: 07/15/2014 10:45 **Dilution:** 1 **File ID:** NI.072914.152136
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0500		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000772		0.000600	0.000300
Chromium, Total	7440-47-3	0.00489		0.00200	0.00100
Copper, Total	7440-50-8	0.00311		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00249		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0246		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00101		0.00100	0.000500
Zinc, Total	7440-66-6	0.0148	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L14071368
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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-02
Client ID: MW 1-1 D
Matrix: Water
Workgroup #: WG485369
Collect Date: 07/15/2014 11:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: FJB
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 07/09/2014 19:50
Run Date: 07/24/2014 22:27
File ID: 17M007089

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.09		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	109	80	120	
Toluene-d8	104	88	110	

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Lab Contact: Kathy Albertson

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4-Bromofluorobenzene	106	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-02 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW 1-1 D **Prep Method:** 3015 **Prep Date:** 07/30/2014 07:30
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 07/30/2014 10:38
Workgroup #: WG486326 **Analyst:** JYH **Run Date:** 07/30/2014 11:36
Collect Date: 07/15/2014 11:00 **Dilution:** 1 **File ID:** P2.073014.113603
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	9.44		0.500	0.250
Iron, Total	7439-89-6	0.0608	J	0.100	0.0500
Magnesium, Total	7439-95-4	5.18		0.500	0.250
Potassium, Total	7440-09-7	0.767	J	1.00	0.500
Sodium, Total	7440-23-5	80.1		0.500	0.250
Strontium, Total	7440-24-6	0.337		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-02 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 1-1 D **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 15:24
Collect Date: 07/15/2014 11:00 **Dilution:** 1 **File ID:** NI.072914.152444
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0474		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000619		0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00303		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00191	J	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0242		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000980	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-03
Client ID: MW 1-2
Matrix: Water
Workgroup #: WG485369
Collect Date: 07/15/2014 14:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: FJB
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 07/09/2014 19:50
Run Date: 07/24/2014 22:47
File ID: 17M007090

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5	0.135	J	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.801	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	110	80	120	

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Toluene-d8	109	88	110	
4-Bromofluorobenzene	116	86	115	*

*	Surrogate or spike compound out of range
J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-03 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW 1-2 **Prep Method:** 3015 **Prep Date:** 07/30/2014 07:30
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 07/30/2014 10:38
Workgroup #: WG486326 **Analyst:** JYH **Run Date:** 07/30/2014 12:40
Collect Date: 07/15/2014 14:30 **Dilution:** 1 **File ID:** P2.073014.124030
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	22.0		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	1.23		0.500	0.250
Potassium, Total	7440-09-7	2.89		1.00	0.500
Sodium, Total	7440-23-5	105		0.500	0.250
Strontium, Total	7440-24-6	3.03		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-03 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 1-2 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 15:27
Collect Date: 07/15/2014 14:30 **Dilution:** 1 **File ID:** NI.072914.152753
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.130		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000360	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00211		0.00200	0.00100
Copper, Total	7440-50-8	0.00715		0.00200	0.00100
Lead, Total	7439-92-1	0.000512	J	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0	0.00336	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0159		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100

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Analyte	CAS #	Result	Qual	RL	MDL
Vanadium, Total	7440-62-2	0.0101		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-04
Client ID: MW 1-3
Matrix: Water
Workgroup #: WG485369
Collect Date: 07/15/2014 16:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: FJB
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 07/09/2014 19:50
Run Date: 07/24/2014 23:07
File ID: 17M007091

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.02		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

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Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.4	86	118	
1,2-Dichloroethane-d4	107	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	107	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-04
Client ID: MW 1-3
Matrix: Water
Workgroup #: WG486326
Collect Date: 07/15/2014 16:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 07/30/2014 07:30
Cal Date: 07/30/2014 10:38
Run Date: 07/30/2014 12:43
File ID: P2.073014.124356

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	5.59		0.200	0.100
Calcium, Total	7440-70-2	8.02		0.500	0.250
Iron, Total	7439-89-6	3.28		0.100	0.0500
Magnesium, Total	7439-95-4	3.70		0.500	0.250
Potassium, Total	7440-09-7	1.58		1.00	0.500
Sodium, Total	7440-23-5	80.9		0.500	0.250
Strontium, Total	7440-24-6	0.559		0.0500	0.0250

Sample #: L14071368-04
Client ID: MW 1-3
Matrix: Water
Workgroup #: WG486001
Collect Date: 07/15/2014 16:00
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 07/28/2014 09:26
Cal Date: 07/30/2014 10:11
Run Date: 07/30/2014 16:11
File ID: NI.073014.161131

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0702		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00534		0.00200	0.00100
Copper, Total	7440-50-8	0.00285		0.00200	0.00100
Lead, Total	7439-92-1	0.00148		0.00100	0.000500
Manganese, Total	7439-96-5	0.0137		0.00200	0.00100
Nickel, Total	7440-02-0	0.00308	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0372		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100

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Analyte	CAS #	Result	Qual	RL	MDL
Vanadium, Total	7440-62-2	0.00525		0.00100	0.000500
Zinc, Total	7440-66-6	0.0233	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-05
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/16/2014 09:35
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 15:57
File ID: 8M398954

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.87		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.81		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

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Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.2	86	118	
1,2-Dichloroethane-d4	105	80	120	
Toluene-d8	94.2	88	110	
4-Bromofluorobenzene	90.5	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-05
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG485928
Collect Date: 07/16/2014 09:35
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/28/2014 08:17
Cal Date: 07/28/2014 08:27
Run Date: 07/28/2014 19:41
File ID: T2.072814.194141

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.386		0.200	0.100
Calcium, Total	7440-70-2	5.80		0.500	0.250
Iron, Total	7439-89-6	0.310		0.100	0.0500
Magnesium, Total	7439-95-4	2.23		0.500	0.250
Potassium, Total	7440-09-7	1.02		1.00	0.500
Sodium, Total	7440-23-5	32.3		0.500	0.250
Strontium, Total	7440-24-6	0.154		0.0500	0.0250

Sample #: L14071368-05
Client ID: MW 2-1
Matrix: Water
Workgroup #: WG486001
Collect Date: 07/16/2014 09:35
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 07/28/2014 09:26
Cal Date: 07/29/2014 10:57
Run Date: 07/29/2014 15:43
File ID: NI.072914.154335

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0568		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0267		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00119		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100

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Analyte	CAS #	Result	Qual	RL	MDL
Vanadium, Total	7440-62-2	0.00121		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-06
Client ID: MW 2-1 MS
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/16/2014 09:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 12:07
File ID: 8M398946

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	20.1		10.0	2.50
Benzene	71-43-2	18.8		1.00	0.125
Bromobenzene	108-86-1	20.5		1.00	0.125
Bromochloromethane	74-97-5	19.2		1.00	0.200
Bromodichloromethane	75-27-4	20.1		1.00	0.250
Bromoform	75-25-2	20.8		1.00	0.500
Bromomethane	74-83-9	12.5		1.00	0.500
2-Butanone	78-93-3	19.2		10.0	2.50
n-Butylbenzene	104-51-8	20.3		1.00	0.250
sec-Butylbenzene	135-98-8	19.7		1.00	0.250
tert-Butylbenzene	98-06-6	20.1		1.00	0.250
Carbon disulfide	75-15-0	16.2		1.00	0.500
Carbon tetrachloride	56-23-5	21.9		1.00	0.250
Chlorobenzene	108-90-7	18.8		1.00	0.125
Chlorodibromomethane	124-48-1	20.8		1.00	0.250
Chloroethane	75-00-3	18.7		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8	3.95	J	10.0	2.00
Chloroform	67-66-3	20.4		1.00	0.125
Chloromethane	74-87-3	19.2		1.00	0.500
2-Chlorotoluene	95-49-8	20.7		1.00	0.125
4-Chlorotoluene	106-43-4	18.1		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	19.7		5.00	1.00
1,2-Dibromoethane	106-93-4	19.7		1.00	0.250
Dibromomethane	74-95-3	19.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	19.2		1.00	0.125
1,3-Dichlorobenzene	541-73-1	19.0		1.00	0.250
1,4-Dichlorobenzene	106-46-7	20.3		1.00	0.125
Dichlorodifluoromethane	75-71-8	29.5		1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethane	75-34-3	18.6		1.00	0.125
1,2-Dichloroethane	107-06-2	20.4		1.00	0.250
1,1-Dichloroethene	75-35-4	18.9		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.0		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	19.7		1.00	0.250
1,2-Dichloropropane	78-87-5	18.0		1.00	0.200
1,3-Dichloropropane	142-28-9	18.3		1.00	0.200
2,2-Dichloropropane	594-20-7	21.1		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	19.5		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	19.0		1.00	0.500
1,1-Dichloropropene	563-58-6	20.0		1.00	0.250
Ethylbenzene	100-41-4	20.3		1.00	0.250
2-Hexanone	591-78-6	17.2		10.0	2.50
Hexachlorobutadiene	87-68-3	22.5		1.00	0.250
Isopropylbenzene	98-82-8	19.9		1.00	0.250
p-Isopropyltoluene	99-87-6	19.7		1.00	0.250
4-Methyl-2-pentanone	108-10-1	16.5		10.0	2.50
Methylene chloride	75-09-2	18.6		5.00	0.250
Naphthalene	91-20-3	21.7		1.00	0.200
n-Propylbenzene	103-65-1	19.4		1.00	0.125
Styrene	100-42-5	20.6		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.5		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	17.6		1.00	0.200
Tetrachloroethene	127-18-4	21.9		1.00	0.250
Toluene	108-88-3	20.0		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.7		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	21.3		1.00	0.200
1,1,1-Trichloroethane	71-55-6	22.1		1.00	0.250
1,1,2-Trichloroethane	79-00-5	19.2		1.00	0.250
Trichloroethene	79-01-6	22.1		1.00	0.250
Trichlorofluoromethane	75-69-4	24.0		1.00	0.250
1,2,3-Trichloropropane	96-18-4	20.3		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	21.4		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	22.2		1.00	0.250
Vinyl acetate	108-05-4	23.7		10.0	2.50
Vinyl chloride	75-01-4	22.7		1.00	0.250
o-Xylene	95-47-6	19.2		1.00	0.250
m-,p-Xylene	179601-23-1	39.6		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Dibromofluoromethane	94.0	86	118	
1,2-Dichloroethane-d4	96.3	80	120	
Toluene-d8	95.1	88	110	
4-Bromofluorobenzene	92.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14071368-06 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW 2-1 MS **Prep Method:** 3015 **Prep Date:** 07/28/2014 08:17
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 07/28/2014 08:27
Workgroup #: WG485928 **Analyst:** KHR **Run Date:** 07/28/2014 19:45
Collect Date: 07/16/2014 09:45 **Dilution:** 1 **File ID:** T2.072814.194508
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.85		0.200	0.100
Calcium, Total	7440-70-2	13.0		0.500	0.250
Iron, Total	7439-89-6	3.02		0.100	0.0500
Magnesium, Total	7439-95-4	8.16		0.500	0.250
Potassium, Total	7440-09-7	32.5		1.00	0.500
Sodium, Total	7440-23-5	61.4		0.500	0.250
Strontium, Total	7440-24-6	0.799		0.0500	0.0250

Sample #: L14071368-06 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 2-1 MS **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:25
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 15:56
Collect Date: 07/16/2014 09:45 **Dilution:** 1 **File ID:** NI.072914.155653
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0624		0.00100	0.000500
Barium, Total	7440-39-3	0.118		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0627		0.000600	0.000300
Chromium, Total	7440-47-3	0.0616		0.00200	0.00100
Copper, Total	7440-50-8	0.0642		0.00200	0.00100
Lead, Total	7439-92-1	0.0641		0.00100	0.000500
Manganese, Total	7439-96-5	0.0886		0.00200	0.00100
Nickel, Total	7440-02-0	0.0628		0.00400	0.00200
Selenium, Total	7782-49-2	0.0634		0.00100	0.000500
Thallium, Total	7440-28-0	0.0613		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0612		0.00100	0.000500

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.0725		0.0250	0.0125

Sample #: L14071368-07
Client ID: MW 2-1 MSD
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/16/2014 09:55
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 12:35
File ID: 8M398947

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	23.1		10.0	2.50
Benzene	71-43-2	18.7		1.00	0.125
Bromobenzene	108-86-1	20.1		1.00	0.125
Bromochloromethane	74-97-5	19.8		1.00	0.200
Bromodichloromethane	75-27-4	20.3		1.00	0.250
Bromoform	75-25-2	21.3		1.00	0.500
Bromomethane	74-83-9	13.0		1.00	0.500
2-Butanone	78-93-3	21.4		10.0	2.50
n-Butylbenzene	104-51-8	19.2		1.00	0.250
sec-Butylbenzene	135-98-8	18.8		1.00	0.250
tert-Butylbenzene	98-06-6	18.7		1.00	0.250
Carbon disulfide	75-15-0	16.9		1.00	0.500
Carbon tetrachloride	56-23-5	21.2		1.00	0.250
Chlorobenzene	108-90-7	18.5		1.00	0.125
Chlorodibromomethane	124-48-1	21.4		1.00	0.250
Chloroethane	75-00-3	18.6		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.1		1.00	0.125
Chloromethane	74-87-3	19.1		1.00	0.500
2-Chlorotoluene	95-49-8	18.9		1.00	0.125
4-Chlorotoluene	106-43-4	18.1		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	20.9		5.00	1.00
1,2-Dibromoethane	106-93-4	20.4		1.00	0.250
Dibromomethane	74-95-3	21.0		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.8		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.7		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.4		1.00	0.125
Dichlorodifluoromethane	75-71-8	28.6		1.00	0.250
1,1-Dichloroethane	75-34-3	18.8		1.00	0.125
1,2-Dichloroethane	107-06-2	21.4		1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethene	75-35-4	19.0		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	19.8		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	19.9		1.00	0.250
1,2-Dichloropropane	78-87-5	18.4		1.00	0.200
1,3-Dichloropropane	142-28-9	19.0		1.00	0.200
2,2-Dichloropropane	594-20-7	20.6		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.2		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	19.4		1.00	0.500
1,1-Dichloropropene	563-58-6	19.3		1.00	0.250
Ethylbenzene	100-41-4	19.5		1.00	0.250
2-Hexanone	591-78-6	18.7		10.0	2.50
Hexachlorobutadiene	87-68-3	22.1		1.00	0.250
Isopropylbenzene	98-82-8	19.1		1.00	0.250
p-Isopropyltoluene	99-87-6	18.7		1.00	0.250
4-Methyl-2-pentanone	108-10-1	17.6		10.0	2.50
Methylene chloride	75-09-2	18.8		5.00	0.250
Naphthalene	91-20-3	22.2		1.00	0.200
n-Propylbenzene	103-65-1	18.5		1.00	0.125
Styrene	100-42-5	20.2		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	21.1		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	18.8		1.00	0.200
Tetrachloroethene	127-18-4	21.2		1.00	0.250
Toluene	108-88-3	19.3		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.8		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	20.8		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.6		1.00	0.250
1,1,2-Trichloroethane	79-00-5	19.9		1.00	0.250
Trichloroethene	79-01-6	22.1		1.00	0.250
Trichlorofluoromethane	75-69-4	23.6		1.00	0.250
1,2,3-Trichloropropane	96-18-4	20.8		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	20.6		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	21.1		1.00	0.250
Vinyl acetate	108-05-4	25.4		10.0	2.50
Vinyl chloride	75-01-4	21.8		1.00	0.250
o-Xylene	95-47-6	19.0		1.00	0.250
m-,p-Xylene	179601-23-1	38.7		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	96.9	86	118	
1,2-Dichloroethane-d4	102	80	120	

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Toluene-d8	94.5	88	110	
4-Bromofluorobenzene	90.8	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-07 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW 2-1 MSD **Prep Method:** 3015 **Prep Date:** 07/28/2014 08:17
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 07/28/2014 08:27
Workgroup #: WG485928 **Analyst:** KHR **Run Date:** 07/28/2014 19:48
Collect Date: 07/16/2014 09:55 **Dilution:** 1 **File ID:** T2.072814.194819
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.61		0.200	0.100
Calcium, Total	7440-70-2	11.5		0.500	0.250
Iron, Total	7439-89-6	2.88		0.100	0.0500
Magnesium, Total	7439-95-4	8.04		0.500	0.250
Potassium, Total	7440-09-7	31.9		1.00	0.500
Sodium, Total	7440-23-5	61.4		0.500	0.250
Strontium, Total	7440-24-6	0.783		0.0500	0.0250

Sample #: L14071368-07 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 2-1 MSD **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:25
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 16:00
Collect Date: 07/16/2014 09:55 **Dilution:** 1 **File ID:** NI.072914.160001
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0637		0.00100	0.000500
Barium, Total	7440-39-3	0.124		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0643		0.000600	0.000300
Chromium, Total	7440-47-3	0.0646		0.00200	0.00100
Copper, Total	7440-50-8	0.0669		0.00200	0.00100
Lead, Total	7439-92-1	0.0657		0.00100	0.000500
Manganese, Total	7439-96-5	0.0950		0.00200	0.00100
Nickel, Total	7440-02-0	0.0658		0.00400	0.00200
Selenium, Total	7782-49-2	0.0647		0.00100	0.000500
Thallium, Total	7440-28-0	0.0622		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0641		0.00100	0.000500
Zinc, Total	7440-66-6	0.0789		0.0250	0.0125

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	MW 2-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/09/2014 19:50
Workgroup #:	WG485369	**Analyst:**	FJB	**Run Date:**	07/24/2014 23:26
Collect Date:	07/16/2014 11:15	**Dilution:**	1	**File ID:**	17M007092
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	86	118	
1,2-Dichloroethane-d4	109	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	118	86	115	*

*	Surrogate or spike compound out of range

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-08 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW 2-2 **Prep Method:** 3015 **Prep Date:** 07/30/2014 12:46
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 08/01/2014 09:57
Workgroup #: WG486423 **Analyst:** QX **Run Date:** 08/01/2014 10:28
Collect Date: 07/16/2014 11:15 **Dilution:** 1 **File ID:** T2.080114.102825
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	11.5		0.200	0.100
Calcium, Total	7440-70-2	2.52		0.500	0.250
Iron, Total	7439-89-6	11.3		0.100	0.0500
Magnesium, Total	7439-95-4	2.25		0.500	0.250
Potassium, Total	7440-09-7	1.96		1.00	0.500
Sodium, Total	7440-23-5	24.5		0.500	0.250
Strontium, Total	7440-24-6	0.0835		0.0500	0.0250

Sample #: L14071368-08 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 2-2 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:25
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 16:03
Collect Date: 07/16/2014 11:15 **Dilution:** 1 **File ID:** NI.072914.160310
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.141		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00511		0.00200	0.00100
Copper, Total	7440-50-8	0.00430		0.00200	0.00100
Lead, Total	7439-92-1	0.00352		0.00100	0.000500
Manganese, Total	7439-96-5	0.0274		0.00200	0.00100
Nickel, Total	7440-02-0	0.00777		0.00400	0.00200
Selenium, Total	7782-49-2	0.00279		0.00100	0.000500
Thallium, Total	7440-28-0	0.000118	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00987		0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L14071368-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 2-2	**Prep Method:**	3015	**Prep Date:**	07/28/2014 09:25
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/30/2014 10:11
Workgroup #:	WG486001	**Analyst:**	JYH	**Run Date:**	07/30/2014 16:17
Collect Date:	07/16/2014 11:15	**Dilution:**	5	**File ID:**	NI.073014.161748
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.325		0.125	0.0625

Sample #:	L14071368-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	MW 2-3	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/09/2014 19:50
Workgroup #:	WG485369	**Analyst:**	FJB	**Run Date:**	07/24/2014 23:46
Collect Date:	07/16/2014 13:00	**Dilution:**	1	**File ID:**	17M007093
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.460	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	107	80	120	
Toluene-d8	106	88	110	
4-Bromofluorobenzene	109	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-09
Client ID: MW 2-3
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/16/2014 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 10:31
File ID: T2.080114.103152

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	4.08		0.200	0.100
Calcium, Total	7440-70-2	6.15		0.500	0.250
Iron, Total	7439-89-6	3.78		0.100	0.0500
Magnesium, Total	7439-95-4	0.905		0.500	0.250
Potassium, Total	7440-09-7	1.44		1.00	0.500
Sodium, Total	7440-23-5	23.5		0.500	0.250
Strontium, Total	7440-24-6	0.634		0.0500	0.0250

Sample #: L14071368-09
Client ID: MW 2-3
Matrix: Water
Workgroup #: WG486001
Collect Date: 07/16/2014 13:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 07/28/2014 09:26
Cal Date: 07/29/2014 10:57
Run Date: 07/29/2014 16:06
File ID: NI.072914.160618

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0771		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00425		0.00200	0.00100

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Analyte	CAS #	Result	Qual	RL	MDL
Copper, Total	7440-50-8	0.00209		0.00200	0.00100
Lead, Total	7439-92-1	0.00161		0.00100	0.000500
Manganese, Total	7439-96-5	0.0146		0.00200	0.00100
Nickel, Total	7440-02-0	0.00390	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00182		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00664		0.00100	0.000500
Zinc, Total	7440-66-6	0.0181	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-10
Client ID: 35BWW10
Matrix: Water
Workgroup #: WG485369
Collect Date: 07/16/2014 15:53
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: FJB
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 07/09/2014 19:50
Run Date: 07/25/2014 00:06
File ID: 17M007094

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	0.963	J	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	39.8		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500

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Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	86	118	
1,2-Dichloroethane-d4	108	80	120	
Toluene-d8	104	88	110	
4-Bromofluorobenzene	111	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-10
Client ID: 35BWW10
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/16/2014 15:53
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 10:35
File ID: T2.080114.103522

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.315		0.200	0.100
Calcium, Total	7440-70-2	7.50		0.500	0.250
Iron, Total	7439-89-6	0.336		0.100	0.0500
Magnesium, Total	7439-95-4	4.44		0.500	0.250
Potassium, Total	7440-09-7	0.861	J	1.00	0.500
Sodium, Total	7440-23-5	87.5		0.500	0.250
Strontium, Total	7440-24-6	0.245		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14071368-10
Client ID: 35BWW10
Matrix: Water
Workgroup #: WG486001
Collect Date: 07/16/2014 15:53
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 07/28/2014 09:26
Cal Date: 07/29/2014 10:57
Run Date: 07/29/2014 16:09
File ID: NI.072914.160926

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500

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Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.0635		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1	0.000783	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00817		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00918		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00242		0.00100	0.000500
Zinc, Total	7440-66-6	0.0151	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-11
Client ID: TRIP BLANK 16JUL2014
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/16/2014 00:01
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 14:30
File ID: 8M398951

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	92.9	86	118	
1,2-Dichloroethane-d4	99.0	80	120	
Toluene-d8	92.9	88	110	
4-Bromofluorobenzene	91.7	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-12
Client ID: MW 3-1
Matrix: Water
Workgroup #: WG485369
Collect Date: 07/17/2014 12:25
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: FJB
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 07/09/2014 19:50
Run Date: 07/25/2014 00:25
File ID: 17M007095

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	3.39	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	13.9		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.72		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	105	80	120	
Toluene-d8	104	88	110	
4-Bromofluorobenzene	114	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-12
Client ID: MW 3-1
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/17/2014 12:25
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 10:38
File ID: T2.080114.103855

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.560		0.200	0.100
Calcium, Total	7440-70-2	21.6		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	0.904		0.500	0.250
Potassium, Total	7440-09-7	6.35		1.00	0.500
Sodium, Total	7440-23-5	76.7		0.500	0.250
Strontium, Total	7440-24-6	1.73		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L14071368-12	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 3-1	**Prep Method:**	3015	**Prep Date:**	07/28/2014 09:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2014 10:57
Workgroup #:	WG486001	**Analyst:**	JYH	**Run Date:**	07/29/2014 16:12
Collect Date:	07/17/2014 12:25	**Dilution:**	1	**File ID:**	NI.072914.161235
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0819		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00153	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00119	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0	0.00310	J	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0167		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L14071368-13	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	FIELD BLANK 17JUL2014	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/09/2014 19:50
Workgroup #:	WG485369	**Analyst:**	FJB	**Run Date:**	07/24/2014 20:49
Collect Date:	07/17/2014 08:40	**Dilution:**	1	**File ID:**	17M007084
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3	0.287	J	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	0.300	J	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	107	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	109	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-13
Client ID: FIELD BLANK 17JUL2014
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/17/2014 08:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 10:42
File ID: T2.080114.104228

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-13 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: FIELD BLANK 17JUL2014 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 16:15
Collect Date: 07/17/2014 08:40 **Dilution:** 1 **File ID:** NI.072914.161543
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-14 **PrePrep Method:** N/A **Instrument:** HPMS17
Client ID: MW 3-2 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 07/09/2014 19:50
Workgroup #: WG485369 **Analyst:** FJB **Run Date:** 07/25/2014 00:45
Collect Date: 07/17/2014 15:40 **Dilution:** 1 **File ID:** 17M007096
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.627	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.26		1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	64.1		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.38		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.6	86	118	
1,2-Dichloroethane-d4	104	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	103	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-14
Client ID: MW 3-2
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/17/2014 15:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 10:46
File ID: T2.080114.104601

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.133	J	0.200	0.100
Calcium, Total	7440-70-2	30.0		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	4.67		0.500	0.250
Potassium, Total	7440-09-7	1.63		1.00	0.500
Sodium, Total	7440-23-5	28.8		0.500	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Strontium, Total	7440-24-6	2.65		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-14 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 3-2 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 16:18
Collect Date: 07/17/2014 15:40 **Dilution:** 1 **File ID:** NI.072914.161852
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.223		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00145	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0180		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00309		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00592		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-15 **PrePrep Method:** N/A **Instrument:** HPMS17
Client ID: TRIP BLANK **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 07/09/2014 19:50
Workgroup #: WG485369 **Analyst:** FJB **Run Date:** 07/24/2014 21:08
Collect Date: 07/17/2014 00:01 **Dilution:** 1 **File ID:** 17M007085
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	109	80	120	
Toluene-d8	108	88	110	
4-Bromofluorobenzene	110	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-16
Client ID: MW 3-3
Matrix: Water
Workgroup #: WG485369
Collect Date: 07/18/2014 09:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: FJB
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 07/09/2014 19:50
Run Date: 07/25/2014 01:05
File ID: 17M007097

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	12.1		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.59		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	108	80	120	
Toluene-d8	103	88	110	
4-Bromofluorobenzene	105	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-16
Client ID: MW 3-3
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/18/2014 09:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 11:03
File ID: T2.080114.110315

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.863		0.200	0.100

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Calcium, Total	7440-70-2	10.5		0.500	0.250
Iron, Total	7439-89-6	1.29		0.100	0.0500
Magnesium, Total	7439-95-4	1.75		0.500	0.250
Potassium, Total	7440-09-7	1.14		1.00	0.500
Sodium, Total	7440-23-5	65.5		0.500	0.250
Strontium, Total	7440-24-6	0.867		0.0500	0.0250

Sample #: L14071368-16 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 3-3 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 16:22
Collect Date: 07/18/2014 09:15 **Dilution:** 1 **File ID:** NI.072914.162200
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0839		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00467		0.00200	0.00100
Copper, Total	7440-50-8	0.00135	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000762	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0165		0.00200	0.00100
Nickel, Total	7440-02-0	0.00237	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0122		0.00100	0.000500
Thallium, Total	7440-28-0	0.000143	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00592		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-17 **PrePrep Method:** N/A **Instrument:** HPMS17
Client ID: 35BWW04 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 07/09/2014 19:50
Workgroup #: WG485369 **Analyst:** FJB **Run Date:** 07/25/2014 01:24
Collect Date: 07/18/2014 09:30 **Dilution:** 1 **File ID:** 17M007098
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.420	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.672	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	28.6		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.81		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	91.5	86	118	
1,2-Dichloroethane-d4	97.4	80	120	
Toluene-d8	97.5	88	110	
4-Bromofluorobenzene	107	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-17
Client ID: 35BWW04
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/18/2014 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 11:06
File ID: T2.080114.110645

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.496		0.200	0.100
Calcium, Total	7440-70-2	8.07		0.500	0.250
Iron, Total	7439-89-6	1.05		0.100	0.0500
Magnesium, Total	7439-95-4	4.04		0.500	0.250
Potassium, Total	7440-09-7	0.685	J	1.00	0.500
Sodium, Total	7440-23-5	60.5		0.500	0.250
Strontium, Total	7440-24-6	0.257		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14071368-17 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW04 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 16:25
Collect Date: 07/18/2014 09:30 **Dilution:** 1 **File ID:** NI.072914.162508
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0659		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00133	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00121	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000645	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00497		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00156		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00348		0.00100	0.000500
Zinc, Total	7440-66-6	0.0165	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-18 **PrePrep Method:** N/A **Instrument:** HPMS17
Client ID: TRIP BLANK 18JUL2014 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 07/09/2014 19:50
Workgroup #: WG485369 **Analyst:** FJB **Run Date:** 07/24/2014 21:28
Collect Date: 07/18/2014 00:01 **Dilution:** 1 **File ID:** 17M007086
Sample Tag: 01 **Units:** ug/L

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	86	118	
1,2-Dichloroethane-d4	108	80	120	
Toluene-d8	107	88	110	
4-Bromofluorobenzene	103	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-19
Client ID: LHS MW-58
Matrix: Water
Workgroup #: WG485369
Collect Date: 07/18/2014 12:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: FJB
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 07/09/2014 19:50
Run Date: 07/25/2014 01:44
File ID: 17M007099

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	8.46		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.31		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	101	86	118	
1,2-Dichloroethane-d4	111	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	107	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	LHS MW-58	**Prep Method:**	3015	**Prep Date:**	07/30/2014 12:46
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	08/01/2014 09:57
Workgroup #:	WG486423	**Analyst:**	QX	**Run Date:**	08/01/2014 11:10
Collect Date:	07/18/2014 12:00	**Dilution:**	1	**File ID:**	T2.080114.111018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.329		0.200	0.100
Calcium, Total	7440-70-2	21.7		0.500	0.250
Iron, Total	7439-89-6	0.329		0.100	0.0500
Magnesium, Total	7439-95-4	6.72		0.500	0.250
Potassium, Total	7440-09-7	2.50		1.00	0.500
Sodium, Total	7440-23-5	41.2		0.500	0.250
Strontium, Total	7440-24-6	0.387		0.0500	0.0250

Sample #:	L14071368-19	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	LHS MW-58	**Prep Method:**	3015	**Prep Date:**	07/28/2014 09:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2014 10:57
Workgroup #:	WG486001	**Analyst:**	JYH	**Run Date:**	07/29/2014 16:34
Collect Date:	07/18/2014 12:00	**Dilution:**	1	**File ID:**	NI.072914.163437
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.199		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00708		0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00854		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00547		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00271		0.00100	0.000500
Zinc, Total	7440-66-6	0.0146	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-20	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	LHS MW-58 D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/09/2014 19:50
Workgroup #:	WG485369	**Analyst:**	FJB	**Run Date:**	07/25/2014 02:04
Collect Date:	07/18/2014 12:15	**Dilution:**	1	**File ID:**	17M007100
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	8.20		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.23		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	100	86	118	
1,2-Dichloroethane-d4	107	80	120	
Toluene-d8	104	88	110	
4-Bromofluorobenzene	108	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	LHS MW-58 D	**Prep Method:**	3015	**Prep Date:**	07/30/2014 12:46
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	08/01/2014 09:57
Workgroup #:	WG486423	**Analyst:**	QX	**Run Date:**	08/01/2014 11:13
Collect Date:	07/18/2014 12:15	**Dilution:**	1	**File ID:**	T2.080114.111348
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.162	J	0.200	0.100
Calcium, Total	7440-70-2	21.2		0.500	0.250
Iron, Total	7439-89-6	0.243		0.100	0.0500
Magnesium, Total	7439-95-4	6.65		0.500	0.250
Potassium, Total	7440-09-7	2.56		1.00	0.500
Sodium, Total	7440-23-5	40.5		0.500	0.250
Strontium, Total	7440-24-6	0.378		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #:	L14071368-20	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	LHS MW-58 D	**Prep Method:**	3015	**Prep Date:**	07/28/2014 09:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2014 10:57
Workgroup #:	WG486001	**Analyst:**	JYH	**Run Date:**	07/29/2014 16:37
Collect Date:	07/18/2014 12:15	**Dilution:**	1	**File ID:**	NI.072914.163745
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.188		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00637		0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00911		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00491		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00247		0.00100	0.000500
Zinc, Total	7440-66-6	0.0128	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-21	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW03	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/14/2014 18:27
Workgroup #:	WG485714	**Analyst:**	TMB	**Run Date:**	07/25/2014 16:25
Collect Date:	07/18/2014 13:35	**Dilution:**	1	**File ID:**	8M398955
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.6	86	118	
1,2-Dichloroethane-d4	106	80	120	
Toluene-d8	95.2	88	110	
4-Bromofluorobenzene	92.5	86	115	

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	35BWW03	**Prep Method:**	3015	**Prep Date:**	07/30/2014 12:46
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	08/01/2014 09:57
Workgroup #:	WG486423	**Analyst:**	QX	**Run Date:**	08/01/2014 11:17
Collect Date:	07/18/2014 13:35	**Dilution:**	1	**File ID:**	T2.080114.111718
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	6.75		0.500	0.250
Iron, Total	7439-89-6	0.0682	J	0.100	0.0500
Magnesium, Total	7439-95-4	4.43		0.500	0.250
Potassium, Total	7440-09-7	4.24		1.00	0.500
Sodium, Total	7440-23-5	162		0.500	0.250
Strontium, Total	7440-24-6	0.624		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L14071368-21	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW03	**Prep Method:**	3015	**Prep Date:**	07/28/2014 09:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2014 10:57
Workgroup #:	WG486001	**Analyst:**	JYH	**Run Date:**	07/29/2014 16:40
Collect Date:	07/18/2014 13:35	**Dilution:**	1	**File ID:**	NI.072914.164053
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0975		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00268		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00198		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-22	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 4-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/14/2014 18:27
Workgroup #:	WG485714	**Analyst:**	TMB	**Run Date:**	07/25/2014 16:54
Collect Date:	07/21/2014 09:15	**Dilution:**	1	**File ID:**	8M398956
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.265	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.808	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.348	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	31.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.20		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.6	86	118	
1,2-Dichloroethane-d4	104	80	120	
Toluene-d8	94.7	88	110	
4-Bromofluorobenzene	92.2	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-22 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: MW 4-1 **Prep Method:** 3015 **Prep Date:** 07/30/2014 12:46
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 08/01/2014 09:57
Workgroup #: WG486423 **Analyst:** QX **Run Date:** 08/01/2014 11:20
Collect Date: 07/21/2014 09:15 **Dilution:** 1 **File ID:** T2.080114.112050
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.123	J	0.200	0.100
Calcium, Total	7440-70-2	19.4		0.500	0.250
Iron, Total	7439-89-6	0.223		0.100	0.0500
Magnesium, Total	7439-95-4	8.86		0.500	0.250
Potassium, Total	7440-09-7	1.73		1.00	0.500
Sodium, Total	7440-23-5	92.4		0.500	0.250
Strontium, Total	7440-24-6	0.579		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14071368-22 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-1 **Prep Method:** 3015 **Prep Date:** 07/28/2014 13:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486021 **Analyst:** JYH **Run Date:** 07/29/2014 13:26
Collect Date: 07/21/2014 09:15 **Dilution:** 1 **File ID:** NI.072914.132653
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0578		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00133	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.000716	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00134		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L14071368-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-1	**Prep Method:**	3015	**Prep Date:**	07/28/2014 13:17
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/30/2014 10:11
Workgroup #:	WG486021	**Analyst:**	JYH	**Run Date:**	07/30/2014 16:02
Collect Date:	07/21/2014 09:15	**Dilution:**	5	**File ID:**	NI.073014.160206
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.174		0.0100	0.00500

Sample #:	L14071368-23	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 4-1 MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/14/2014 18:27
Workgroup #:	WG485714	**Analyst:**	TMB	**Run Date:**	07/25/2014 13:04
Collect Date:	07/21/2014 09:30	**Dilution:**	1	**File ID:**	8M398948
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	22.5		10.0	2.50
Benzene	71-43-2	18.0		1.00	0.125
Bromobenzene	108-86-1	19.0		1.00	0.125
Bromochloromethane	74-97-5	19.4		1.00	0.200
Bromodichloromethane	75-27-4	19.3		1.00	0.250
Bromoform	75-25-2	20.6		1.00	0.500
Bromomethane	74-83-9	12.7		1.00	0.500
2-Butanone	78-93-3	20.4		10.0	2.50
n-Butylbenzene	104-51-8	18.0		1.00	0.250
sec-Butylbenzene	135-98-8	17.5		1.00	0.250
tert-Butylbenzene	98-06-6	17.5		1.00	0.250
Carbon disulfide	75-15-0	15.8		1.00	0.500
Carbon tetrachloride	56-23-5	20.0		1.00	0.250
Chlorobenzene	108-90-7	17.6		1.00	0.125
Chlorodibromomethane	124-48-1	20.6		1.00	0.250
Chloroethane	75-00-3	17.8		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	19.3		1.00	0.125
Chloromethane	74-87-3	18.1		1.00	0.500
2-Chlorotoluene	95-49-8	18.7		1.00	0.125
4-Chlorotoluene	106-43-4	15.9		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	19.6		5.00	1.00
1,2-Dibromoethane	106-93-4	19.6		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Dibromomethane	74-95-3	19.9		1.00	0.250
1,2-Dichlorobenzene	95-50-1	17.6		1.00	0.125
1,3-Dichlorobenzene	541-73-1	17.7		1.00	0.250
1,4-Dichlorobenzene	106-46-7	18.4		1.00	0.125
Dichlorodifluoromethane	75-71-8	26.0		1.00	0.250
1,1-Dichloroethane	75-34-3	18.1		1.00	0.125
1,2-Dichloroethane	107-06-2	20.8		1.00	0.250
1,1-Dichloroethene	75-35-4	18.4		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	19.6		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	18.9		1.00	0.250
1,2-Dichloropropane	78-87-5	17.7		1.00	0.200
1,3-Dichloropropane	142-28-9	18.1		1.00	0.200
2,2-Dichloropropane	594-20-7	19.6		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	19.3		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	18.8		1.00	0.500
1,1-Dichloropropene	563-58-6	18.1		1.00	0.250
Ethylbenzene	100-41-4	18.5		1.00	0.250
2-Hexanone	591-78-6	18.2		10.0	2.50
Hexachlorobutadiene	87-68-3	19.7		1.00	0.250
Isopropylbenzene	98-82-8	18.1		1.00	0.250
p-Isopropyltoluene	99-87-6	17.7		1.00	0.250
4-Methyl-2-pentanone	108-10-1	17.7		10.0	2.50
Methylene chloride	75-09-2	18.4		5.00	0.250
Naphthalene	91-20-3	21.2		1.00	0.200
n-Propylbenzene	103-65-1	17.4		1.00	0.125
Styrene	100-42-5	19.3		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.2		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	17.9		1.00	0.200
Tetrachloroethene	127-18-4	42.1		1.00	0.250
Toluene	108-88-3	18.5		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.3		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	19.8		1.00	0.200
1,1,1-Trichloroethane	71-55-6	20.5		1.00	0.250
1,1,2-Trichloroethane	79-00-5	19.1		1.00	0.250
Trichloroethene	79-01-6	22.5		1.00	0.250
Trichlorofluoromethane	75-69-4	22.4		1.00	0.250
1,2,3-Trichloropropane	96-18-4	21.3		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.4		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	19.6		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl acetate	108-05-4	25.2		10.0	2.50
Vinyl chloride	75-01-4	20.5		1.00	0.250
o-Xylene	95-47-6	18.0		1.00	0.250
m-,p-Xylene	179601-23-1	36.7		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.1	86	118	
1,2-Dichloroethane-d4	101	80	120	
Toluene-d8	92.5	88	110	
4-Bromofluorobenzene	92.4	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-23
Client ID: MW 4-1 MS
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/21/2014 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 11:24
File ID: T2.080114.112420

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.52		0.200	0.100
Calcium, Total	7440-70-2	26.7		0.500	0.250
Iron, Total	7439-89-6	2.80		0.100	0.0500
Magnesium, Total	7439-95-4	15.6		0.500	0.250
Potassium, Total	7440-09-7	33.7		1.00	0.500
Sodium, Total	7440-23-5	128		0.500	0.250
Strontium, Total	7440-24-6	1.26		0.0500	0.0250

Sample #: L14071368-23
Client ID: MW 4-1 MS
Matrix: Water
Workgroup #: WG486021
Collect Date: 07/21/2014 09:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 07/28/2014 13:17
Cal Date: 07/29/2014 10:57
Run Date: 07/29/2014 13:30
File ID: NI.072914.133002

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0635		0.00100	0.000500
Barium, Total	7440-39-3	0.117		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0623		0.000600	0.000300
Chromium, Total	7440-47-3	0.0621		0.00200	0.00100
Copper, Total	7440-50-8	0.0646		0.00200	0.00100

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Analyte	CAS #	Result	Qual	RL	MDL
Lead, Total	7439-92-1	0.0633		0.00100	0.000500
Nickel, Total	7440-02-0	0.0624		0.00400	0.00200
Selenium, Total	7782-49-2	0.0637		0.00100	0.000500
Thallium, Total	7440-28-0	0.0615		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0626		0.00100	0.000500
Zinc, Total	7440-66-6	0.0711		0.0250	0.0125

Sample #: L14071368-23
Client ID: MW 4-1 MS
Matrix: Water
Workgroup #: WG486021
Collect Date: 07/21/2014 09:30
Sample Tag: DL01
PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 5
Units: mg/L
Instrument: ICP-MS2
Prep Date: 07/28/2014 13:17
Cal Date: 07/30/2014 10:11
Run Date: 07/30/2014 16:05
File ID: NI.073014.160514

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.240		0.0100	0.00500

Sample #: L14071368-24
Client ID: MW 4-1 MSD
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/21/2014 09:40
Sample Tag: 01
PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L
Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 13:32
File ID: 8M398949

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	24.0		10.0	2.50
Benzene	71-43-2	17.8		1.00	0.125
Bromobenzene	108-86-1	19.8		1.00	0.125
Bromochloromethane	74-97-5	19.7		1.00	0.200
Bromodichloromethane	75-27-4	19.9		1.00	0.250
Bromoform	75-25-2	21.0		1.00	0.500
Bromomethane	74-83-9	13.4		1.00	0.500
2-Butanone	78-93-3	20.2		10.0	2.50
n-Butylbenzene	104-51-8	18.2		1.00	0.250
sec-Butylbenzene	135-98-8	17.9		1.00	0.250
tert-Butylbenzene	98-06-6	17.8		1.00	0.250
Carbon disulfide	75-15-0	15.7		1.00	0.500
Carbon tetrachloride	56-23-5	19.8		1.00	0.250
Chlorobenzene	108-90-7	17.9		1.00	0.125
Chlorodibromomethane	124-48-1	21.4		1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Chloroethane	75-00-3	17.7		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	19.2		1.00	0.125
Chloromethane	74-87-3	17.7		1.00	0.500
2-Chlorotoluene	95-49-8	18.0		1.00	0.125
4-Chlorotoluene	106-43-4	17.3		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	20.7		5.00	1.00
1,2-Dibromoethane	106-93-4	19.4		1.00	0.250
Dibromomethane	74-95-3	20.2		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.0		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.1		1.00	0.250
1,4-Dichlorobenzene	106-46-7	18.7		1.00	0.125
Dichlorodifluoromethane	75-71-8	25.6		1.00	0.250
1,1-Dichloroethane	75-34-3	18.4		1.00	0.125
1,2-Dichloroethane	107-06-2	20.7		1.00	0.250
1,1-Dichloroethene	75-35-4	18.3		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	19.9		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	19.1		1.00	0.250
1,2-Dichloropropane	78-87-5	17.8		1.00	0.200
1,3-Dichloropropane	142-28-9	18.4		1.00	0.200
2,2-Dichloropropane	594-20-7	19.7		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	19.6		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	18.5		1.00	0.500
1,1-Dichloropropene	563-58-6	18.3		1.00	0.250
Ethylbenzene	100-41-4	18.5		1.00	0.250
2-Hexanone	591-78-6	17.9		10.0	2.50
Hexachlorobutadiene	87-68-3	20.3		1.00	0.250
Isopropylbenzene	98-82-8	18.4		1.00	0.250
p-Isopropyltoluene	99-87-6	17.9		1.00	0.250
4-Methyl-2-pentanone	108-10-1	17.7		10.0	2.50
Methylene chloride	75-09-2	18.8		5.00	0.250
Naphthalene	91-20-3	21.8		1.00	0.200
n-Propylbenzene	103-65-1	17.4		1.00	0.125
Styrene	100-42-5	19.5		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	20.1		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	18.4		1.00	0.200
Tetrachloroethene	127-18-4	41.4		1.00	0.250
Toluene	108-88-3	18.4		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.2		1.00	0.150

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Analyte	CAS #	Result	Qual	RL	MDL
1,2,4-Trichlorobenzene	120-82-1	20.0		1.00	0.200
1,1,1-Trichloroethane	71-55-6	20.4		1.00	0.250
1,1,2-Trichloroethane	79-00-5	19.2		1.00	0.250
Trichloroethene	79-01-6	22.6		1.00	0.250
Trichlorofluoromethane	75-69-4	22.5		1.00	0.250
1,2,3-Trichloropropane	96-18-4	20.7		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	19.5		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	20.0		1.00	0.250
Vinyl acetate	108-05-4	25.1		10.0	2.50
Vinyl chloride	75-01-4	20.6		1.00	0.250
o-Xylene	95-47-6	18.1		1.00	0.250
m-,p-Xylene	179601-23-1	36.6		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	96.5	86	118	
1,2-Dichloroethane-d4	101	80	120	
Toluene-d8	93.2	88	110	
4-Bromofluorobenzene	91.6	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-24
Client ID: MW 4-1 MSD
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/21/2014 09:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 11:27
File ID: T2.080114.112734

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.55		0.200	0.100
Calcium, Total	7440-70-2	26.8		0.500	0.250
Iron, Total	7439-89-6	2.80		0.100	0.0500
Magnesium, Total	7439-95-4	15.7		0.500	0.250
Potassium, Total	7440-09-7	33.7		1.00	0.500
Sodium, Total	7440-23-5	128		0.500	0.250
Strontium, Total	7440-24-6	1.26		0.0500	0.0250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Sample #:	L14071368-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-1 MSD	**Prep Method:**	3015	**Prep Date:**	07/28/2014 13:17
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2014 10:57
Workgroup #:	WG486021	**Analyst:**	JYH	**Run Date:**	07/29/2014 13:33
Collect Date:	07/21/2014 09:40	**Dilution:**	1	**File ID:**	NI.072914.133311
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0666		0.00100	0.000500
Barium, Total	7440-39-3	0.124		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0650		0.000600	0.000300
Chromium, Total	7440-47-3	0.0640		0.00200	0.00100
Copper, Total	7440-50-8	0.0645		0.00200	0.00100
Lead, Total	7439-92-1	0.0665		0.00100	0.000500
Nickel, Total	7440-02-0	0.0657		0.00400	0.00200
Selenium, Total	7782-49-2	0.0666		0.00100	0.000500
Thallium, Total	7440-28-0	0.0645		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0650		0.00100	0.000500
Zinc, Total	7440-66-6	0.0799		0.0250	0.0125

Sample #:	L14071368-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-1 MSD	**Prep Method:**	3015	**Prep Date:**	07/28/2014 13:17
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/30/2014 10:11
Workgroup #:	WG486021	**Analyst:**	JYH	**Run Date:**	07/30/2014 16:08
Collect Date:	07/21/2014 09:40	**Dilution:**	5	**File ID:**	NI.073014.160823
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.247		0.0100	0.00500

Sample #:	L14071368-25	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW 4-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/14/2014 18:27
Workgroup #:	WG485714	**Analyst:**	TMB	**Run Date:**	07/25/2014 17:22
Collect Date:	07/21/2014 11:10	**Dilution:**	1	**File ID:**	8M398957
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.330	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.83		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.487	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	6.38		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.22		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.0	86	118	
1,2-Dichloroethane-d4	104	80	120	
Toluene-d8	94.2	88	110	
4-Bromofluorobenzene	92.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-25
Client ID: MW 4-2
Matrix: Water
Workgroup #: WG486423
Collect Date: 07/21/2014 11:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/30/2014 12:46
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 11:30
File ID: T2.080114.113049

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.195	J	0.200	0.100
Calcium, Total	7440-70-2	7.91		0.500	0.250
Iron, Total	7439-89-6	0.275		0.100	0.0500
Magnesium, Total	7439-95-4	4.15		0.500	0.250
Potassium, Total	7440-09-7	1.02		1.00	0.500
Sodium, Total	7440-23-5	84.1		0.500	0.250
Strontium, Total	7440-24-6	0.232		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14071368-25 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW 4-2 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 16:44
Collect Date: 07/21/2014 11:10 **Dilution:** 1 **File ID:** NI.072914.164402
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0417		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00893		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00113		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00149		0.00100	0.000500
Zinc, Total	7440-66-6	0.0135	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-26 **PrePrep Method:** N/A **Instrument:** HPMS8
Client ID: MW 4-3 **Prep Method:** 5030B/5030C/5035A **Prep Date:** N/A
Matrix: Water **Analytical Method:** 8260B **Cal Date:** 07/14/2014 18:27
Workgroup #: WG485714 **Analyst:** TMB **Run Date:** 07/25/2014 17:51
Collect Date: 07/21/2014 14:05 **Dilution:** 1 **File ID:** 8M398958
Sample Tag: 01 **Units:** ug/L

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.148	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.542	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	2.08		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.50		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	96.4	86	118	
1,2-Dichloroethane-d4	106	80	120	
Toluene-d8	94.8	88	110	
4-Bromofluorobenzene	91.6	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MW 4-3	**Prep Method:**	3015	**Prep Date:**	07/30/2014 12:46
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	08/01/2014 09:57
Workgroup #:	WG486423	**Analyst:**	QX	**Run Date:**	08/01/2014 11:34
Collect Date:	07/21/2014 14:05	**Dilution:**	1	**File ID:**	T2.080114.113422
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.13		0.200	0.100
Calcium, Total	7440-70-2	3.36		0.500	0.250
Iron, Total	7439-89-6	2.28		0.100	0.0500
Magnesium, Total	7439-95-4	1.47		0.500	0.250
Potassium, Total	7440-09-7	0.714	J	1.00	0.500
Sodium, Total	7440-23-5	68.4		0.500	0.250
Strontium, Total	7440-24-6	0.0805		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #:	L14071368-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW 4-3	**Prep Method:**	3015	**Prep Date:**	07/28/2014 09:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2014 10:57
Workgroup #:	WG486001	**Analyst:**	JYH	**Run Date:**	07/29/2014 16:47
Collect Date:	07/21/2014 14:05	**Dilution:**	1	**File ID:**	NI.072914.164710
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0663		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00213		0.00200	0.00100
Copper, Total	7440-50-8	0.00161	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000672	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0106		0.00200	0.00100
Nickel, Total	7440-02-0	0.00269	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00201		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00431		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-27	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW17	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/14/2014 18:27
Workgroup #:	WG485714	**Analyst:**	TMB	**Run Date:**	07/25/2014 18:21
Collect Date:	07/21/2014 15:25	**Dilution:**	1	**File ID:**	8M398959
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.6	86	118	
1,2-Dichloroethane-d4	106	80	120	
Toluene-d8	95.7	88	110	
4-Bromofluorobenzene	94.4	86	115	

ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	35BWW17	**Prep Method:**	3015	**Prep Date:**	07/30/2014 12:46
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	08/01/2014 09:57
Workgroup #:	WG486423	**Analyst:**	QX	**Run Date:**	08/01/2014 11:44
Collect Date:	07/21/2014 15:25	**Dilution:**	1	**File ID:**	T2.080114.114446
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.72		0.200	0.100
Calcium, Total	7440-70-2	1.05		0.500	0.250
Iron, Total	7439-89-6	7.71		0.100	0.0500
Magnesium, Total	7439-95-4	0.813		0.500	0.250
Potassium, Total	7440-09-7	1.40		1.00	0.500
Sodium, Total	7440-23-5	14.0		0.500	0.250
Strontium, Total	7440-24-6	0.0341	J	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #:	L14071368-27	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW17	**Prep Method:**	3015	**Prep Date:**	07/28/2014 09:26
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2014 10:57
Workgroup #:	WG486001	**Analyst:**	JYH	**Run Date:**	07/29/2014 16:50
Collect Date:	07/21/2014 15:25	**Dilution:**	1	**File ID:**	NI.072914.165018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0683		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000611		0.000600	0.000300
Chromium, Total	7440-47-3	0.00822		0.00200	0.00100
Copper, Total	7440-50-8	0.00564		0.00200	0.00100
Lead, Total	7439-92-1	0.00458		0.00100	0.000500
Manganese, Total	7439-96-5	0.0570		0.00200	0.00100
Nickel, Total	7440-02-0	0.00843		0.00400	0.00200
Selenium, Total	7782-49-2	0.000944	J	0.00100	0.000500
Thallium, Total	7440-28-0	0.000110	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00893		0.00100	0.000500
Zinc, Total	7440-66-6	0.104		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Microbac

Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14071368-28	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW09	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/14/2014 18:27
Workgroup #:	WG485714	**Analyst:**	TMB	**Run Date:**	07/25/2014 20:43
Collect Date:	07/22/2014 08:30	**Dilution:**	1	**File ID:**	8M398964
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.590	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	1.28		1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	200		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.1	86	118	
1,2-Dichloroethane-d4	109	80	120	
Toluene-d8	94.0	88	110	
4-Bromofluorobenzene	92.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-28 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW09 **Prep Method:** 3015 **Prep Date:** 07/30/2014 12:46
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 08/01/2014 09:57
Workgroup #: WG486423 **Analyst:** QX **Run Date:** 08/01/2014 11:48
Collect Date: 07/22/2014 08:30 **Dilution:** 1 **File ID:** T2.080114.114815
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	36.3		0.500	0.250
Iron, Total	7439-89-6	0.0603	J	0.100	0.0500
Magnesium, Total	7439-95-4	19.8		0.500	0.250
Potassium, Total	7440-09-7	1.72		1.00	0.500
Sodium, Total	7440-23-5	134		0.500	0.250
Strontium, Total	7440-24-6	1.14		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-28 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW09 **Prep Method:** 3015 **Prep Date:** 07/28/2014 09:26
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486001 **Analyst:** JYH **Run Date:** 07/29/2014 16:53
Collect Date: 07/22/2014 08:30 **Dilution:** 1 **File ID:** NI.072914.165327
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0350		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000305	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00148	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00949		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00661		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6	0.0149	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL).

Sample #:	L14071368-29	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	TRIP BLANK 22JUL2014	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/14/2014 18:27
Workgroup #:	WG485714	**Analyst:**	TMB	**Run Date:**	07/25/2014 14:59
Collect Date:	07/22/2014 00:01	**Dilution:**	1	**File ID:**	8M398952
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	94.9	86	118	
1,2-Dichloroethane-d4	102	80	120	
Toluene-d8	93.7	88	110	

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

4-Bromofluorobenzene	90.9	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-30
Client ID: 35BWW08
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/22/2014 09:55
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 20:15
File ID: 8M398963

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	27.4		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.5	86	118	
1,2-Dichloroethane-d4	109	80	120	

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Toluene-d8	94.4	88	110	
4-Bromofluorobenzene	94.3	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-30 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW08 **Prep Method:** 3015 **Prep Date:** 07/30/2014 12:46
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 08/01/2014 09:57
Workgroup #: WG486423 **Analyst:** QX **Run Date:** 08/01/2014 11:51
Collect Date: 07/22/2014 09:55 **Dilution:** 1 **File ID:** T2.080114.115145
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	23.8		0.500	0.250
Iron, Total	7439-89-6	0.202		0.100	0.0500
Magnesium, Total	7439-95-4	13.3		0.500	0.250
Potassium, Total	7440-09-7	1.42		1.00	0.500
Sodium, Total	7440-23-5	126		0.500	0.250
Strontium, Total	7440-24-6	0.801		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-30 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW08 **Prep Method:** 3015 **Prep Date:** 07/28/2014 13:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486021 **Analyst:** JYH **Run Date:** 07/29/2014 13:41
Collect Date: 07/22/2014 09:55 **Dilution:** 1 **File ID:** NI.072914.134142
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0428		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000304	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00146	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0264		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0599		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000972	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

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J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #:	L14071368-31	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	FIELD BLANK 22JUL2014	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	07/14/2014 18:27
Workgroup #:	WG485714	**Analyst:**	TMB	**Run Date:**	07/25/2014 15:28
Collect Date:	07/22/2014 09:30	**Dilution:**	1	**File ID:**	8M398953
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	3.28	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2	0.373	J	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	95.1	86	118	
1,2-Dichloroethane-d4	102	80	120	

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Toluene-d8	94.5	88	110	
4-Bromofluorobenzene	91.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-31 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: FIELD BLANK 22JUL2014 **Prep Method:** 3015 **Prep Date:** 07/30/2014 12:46
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 08/01/2014 09:57
Workgroup #: WG486423 **Analyst:** QX **Run Date:** 08/01/2014 11:55
Collect Date: 07/22/2014 09:30 **Dilution:** 1 **File ID:** T2.080114.115516
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-31 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: FIELD BLANK 22JUL2014 **Prep Method:** 3015 **Prep Date:** 07/28/2014 13:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486021 **Analyst:** JYH **Run Date:** 07/29/2014 13:44
Collect Date: 07/22/2014 09:30 **Dilution:** 1 **File ID:** NI.072914.134451
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500

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Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-32
Client ID: 35BWW05
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/22/2014 11:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 19:18
File ID: 8M398961

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.281	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	2.09		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	15.7		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.9	86	118	

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1,2-Dichloroethane-d4	111	80	120	
Toluene-d8	93.5	88	110	
4-Bromofluorobenzene	93.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-32 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: 35BWW05 **Prep Method:** 3015 **Prep Date:** 07/30/2014 12:46
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 08/01/2014 09:57
Workgroup #: WG486423 **Analyst:** QX **Run Date:** 08/01/2014 11:58
Collect Date: 07/22/2014 11:40 **Dilution:** 1 **File ID:** T2.080114.115850
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.221		0.200	0.100
Calcium, Total	7440-70-2	14.4		0.500	0.250
Iron, Total	7439-89-6	2.04		0.100	0.0500
Magnesium, Total	7439-95-4	8.01		0.500	0.250
Potassium, Total	7440-09-7	0.922	J	1.00	0.500
Sodium, Total	7440-23-5	65.0		0.500	0.250
Strontium, Total	7440-24-6	0.519		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14071368-32 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW05 **Prep Method:** 3015 **Prep Date:** 07/28/2014 13:17
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 07/29/2014 10:57
Workgroup #: WG486021 **Analyst:** JYH **Run Date:** 07/29/2014 14:06
Collect Date: 07/22/2014 11:40 **Dilution:** 1 **File ID:** NI.072914.140656
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0584		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00165	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00131	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000523	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0593		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00131		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100

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Analyte	CAS #	Result	Qual	RL	MDL
Vanadium, Total	7440-62-2	0.00254		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-33
Client ID: 35BWW05 D
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/22/2014 11:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 19:46
File ID: 8M398962

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.283	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	2.02		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	15.1		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.4	86	118	
1,2-Dichloroethane-d4	107	80	120	
Toluene-d8	94.2	88	110	
4-Bromofluorobenzene	92.8	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-33
Client ID: 35BWW05 D
Matrix: Water
Workgroup #: WG486616
Collect Date: 07/22/2014 11:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/31/2014 09:40
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 16:36
File ID: T2.080114.163653

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.637		0.200	0.100
Calcium, Total	7440-70-2	14.8		0.500	0.250
Iron, Total	7439-89-6	2.19		0.100	0.0500
Magnesium, Total	7439-95-4	8.17		0.500	0.250
Potassium, Total	7440-09-7	0.974	J	1.00	0.500
Sodium, Total	7440-23-5	67.5		0.500	0.250
Strontium, Total	7440-24-6	0.538		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14071368-33
Client ID: 35BWW05 D
Matrix: Water
Workgroup #: WG486021
Collect Date: 07/22/2014 11:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 07/28/2014 13:17
Cal Date: 07/29/2014 10:57
Run Date: 07/29/2014 14:10
File ID: NI.072914.141004

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0532		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00115	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0520		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Selenium, Total	7782-49-2	0.00107		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00127		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-34
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG485714
Collect Date: 07/22/2014 13:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 07/14/2014 18:27
Run Date: 07/25/2014 18:49
File ID: 8M398960

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.7	86	118	
1,2-Dichloroethane-d4	108	80	120	
Toluene-d8	94.3	88	110	
4-Bromofluorobenzene	92.7	86	115	

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-34
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG486616
Collect Date: 07/22/2014 13:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: QX
Dilution: 1
Units: mg/L

Instrument: ICP-THERMO2
Prep Date: 07/31/2014 09:40
Cal Date: 08/01/2014 09:57
Run Date: 08/01/2014 16:40
File ID: T2.080114.164022

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	68.3		0.500	0.250
Iron, Total	7439-89-6	2.00		0.100	0.0500
Magnesium, Total	7439-95-4	20.5		0.500	0.250
Potassium, Total	7440-09-7	2.68		1.00	0.500
Sodium, Total	7440-23-5	168		0.500	0.250
Strontium, Total	7440-24-6	2.15		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL).

Sample #: L14071368-34
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG486021
Collect Date: 07/22/2014 13:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 07/28/2014 13:17
Cal Date: 07/29/2014 10:57
Run Date: 07/29/2014 14:13
File ID: NI.072914.141312

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0672		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00217		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.0856		0.00200	0.00100
Nickel, Total	7440-02-0	0.00261	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00583		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL).

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Lab Report #: L14071368
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

METHOD BLANK SUMMARY

Login Number:	L14071368	**Work Group:**	WG485785
Blank File ID:	11M02710	**Blank Sample ID:**	WG485785-01
Prep Date:	07/25/14 15:18	**Instrument ID:**	HPMS11
Analyzed Date:	07/25/14 15:18	**Method:**	8260B
Analyst:	FJB		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG485785-02	11M02716	07/25/14 18:30	01
LCS2	WG485785-03	11M02717	07/25/14 19:02	01
MW 1-1	L14071368-01	11M02721	07/25/14 21:10	01

Report Name: BLANK_SUMMARY
PDF File ID: 3681137
Report generated 07/30/2014 14:28

METHOD BLANK SUMMARY

Login Number:	L14071368	Work Group:	WG485785
Blank File ID:	11M02731	Blank Sample ID:	WG485785-04
Prep Date:	07/26/14 02:28	Instrument ID:	HPMS11
Analyzed Date:	07/26/14 02:28	Method:	8260B
Analyst:	FJB		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG485785-02	11M02716	07/25/14 18:30	01
LCS2	WG485785-03	11M02717	07/25/14 19:02	01
MW 1-1	L14071368-01	11M02721	07/25/14 21:10	01

Report Name: BLANK_SUMMARY
PDF File ID: 3681137
Report generated 07/30/2014 14:28

METHOD BLANK SUMMARY

Login Number: L14071368
Work Group: WG485369
Blank File ID: 17M007077
Blank Sample ID: WG485369-01
Prep Date: 07/24/14 17:15
Instrument ID: HPMS17
Analyzed Date: 07/24/14 17:15
Method: 8260B
Analyst: FJB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG485369-02	17M007078	07/24/14 17:35	01
LCS2	WG485369-03	17M007079	07/24/14 17:55	01
FIELD BLANK 17JUL2014	L14071368-13	17M007084	07/24/14 20:49	01
TRIP BLANK	L14071368-15	17M007085	07/24/14 21:08	01
TRIP BLANK 18JUL2014	L14071368-18	17M007086	07/24/14 21:28	01
MW 1-1 D	L14071368-02	17M007089	07/24/14 22:27	01
MW 1-2	L14071368-03	17M007090	07/24/14 22:47	01
MW 1-3	L14071368-04	17M007091	07/24/14 23:07	01
MW 2-2	L14071368-08	17M007092	07/24/14 23:26	01
MW 2-3	L14071368-09	17M007093	07/24/14 23:46	01
35BWW10	L14071368-10	17M007094	07/25/14 00:06	01
MW 3-1	L14071368-12	17M007095	07/25/14 00:25	01
MW 3-2	L14071368-14	17M007096	07/25/14 00:45	01
MW 3-3	L14071368-16	17M007097	07/25/14 01:05	01
35BWW04	L14071368-17	17M007098	07/25/14 01:24	01
LHS MW-58	L14071368-19	17M007099	07/25/14 01:44	01
LHS MW-58 D	L14071368-20	17M007100	07/25/14 02:04	01

Report Name: BLANK_SUMMARY
PDF File ID: 3681137
Report generated 07/30/2014 14:28

METHOD BLANK SUMMARY

Login Number: L14071368
Blank File ID: 8M398944
Prep Date: 07/25/14 11:09
Analyzed Date: 07/25/14 11:09
Analyst: TMB

Work Group: WG485714
Blank Sample ID: WG485714-01
Instrument ID: HPMS8
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG485714-02	8M398945	07/25/14 11:38	01
MW 2-1 MS	L14071368-06	8M398946	07/25/14 12:07	01
MW 2-1 MSD	L14071368-07	8M398947	07/25/14 12:35	01
MW 4-1 MS	L14071368-23	8M398948	07/25/14 13:04	01
MW 4-1 MSD	L14071368-24	8M398949	07/25/14 13:32	01
TRIP BLANK 16JUL2014	L14071368-11	8M398951	07/25/14 14:30	01
TRIP BLANK 22JUL2014	L14071368-29	8M398952	07/25/14 14:59	01
FIELD BLANK 22JUL2014	L14071368-31	8M398953	07/25/14 15:28	01
MW 2-1	L14071368-05	8M398954	07/25/14 15:57	01
35BWW03	L14071368-21	8M398955	07/25/14 16:25	01
MW 4-1	L14071368-22	8M398956	07/25/14 16:54	01
MW 4-2	L14071368-25	8M398957	07/25/14 17:22	01
MW 4-3	L14071368-26	8M398958	07/25/14 17:51	01
35BWW17	L14071368-27	8M398959	07/25/14 18:21	01
35BWW06	L14071368-34	8M398960	07/25/14 18:49	01
35BWW05	L14071368-32	8M398961	07/25/14 19:18	01
35BWW05 D	L14071368-33	8M398962	07/25/14 19:46	01
35BWW08	L14071368-30	8M398963	07/25/14 20:15	01
35BWW09	L14071368-28	8M398964	07/25/14 20:43	01

Report Name: BLANK_SUMMARY
PDF File ID: 3681137
Report generated 07/30/2014 14:28

Login Number:L14071368 Prep Date:07/25/14 15:18 Sample ID:WG485785-01
Instrument ID:HPMS11 Run Date:07/25/14 15:18 Prep Method:5030B/5030C/503
File ID:11M02710 Analyst:FJB Method:8260B
Workgroup (AAB#):WG485785 Matrix:Water Units:ug/L
Contract #: Cal ID:HPMS11-27-JUN-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3681138
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14071368 Prep Date:07/25/14 15:18 Sample ID:WG485785-01
Instrument ID:HPMS11 Run Date:07/25/14 15:18 Prep Method:5030B/5030C/503
File ID:11M02710 Analyst:FJB Method:8260B
Workgroup (AAB#):WG485785 Matrix:Water Units:ug/L
Contract #: Cal ID:HPMS11-27-JUN-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	92.5	86 - 118	PASS
1,2-Dichloroethane-d4	99.1	80 - 120	PASS
Toluene-d8	95.3	88 - 110	PASS
4-Bromofluorobenzene	99.6	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3681138
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14071368 Prep Date:07/26/14 02:28 Sample ID:WG485785-04
Instrument ID:HPMS11 Run Date:07/26/14 02:28 Prep Method:5030B/5030C/503
File ID:11M02731 Analyst:FJB Method:8260B
Workgroup (AAB#):WG485785 Matrix:Water 2 Units:ug/L
Contract #: Cal ID:HPMS11-27-JUN-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
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Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14071368 Prep Date:07/26/14 02:28 Sample ID:WG485785-04
Instrument ID:HPMS11 Run Date:07/26/14 02:28 Prep Method:5030B/5030C/503
File ID:11M02731 Analyst:FJB Method:8260B
Workgroup (AAB#):WG485785 Matrix:Water 2 Units:ug/L
Contract #: Cal ID:HPMS11-27-JUN-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	94.8	86 - 118	PASS
1,2-Dichloroethane-d4	102	80 - 120	PASS
Toluene-d8	97.7	88 - 110	PASS
4-Bromofluorobenzene	104	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3681138
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Login Number:L14071368 Prep Date:07/24/14 17:15 Sample ID:WG485369-01
Instrument ID:HPMS17 Run Date:07/24/14 17:15 Prep Method:5030B/5030C/503
File ID:17M007077 Analyst:FJB Method:8260B
Workgroup (AAB#):WG485369 Matrix:Water Units:ug/L
Contract #: Cal ID:HPMS17-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3681138
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Login Number: L14071368 Prep Date: 07/24/14 17:15 Sample ID: WG485369-01
Instrument ID: HPMS17 Run Date: 07/24/14 17:15 Prep Method: 5030B/5030C/503
File ID: 17M007077 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG485369 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS17-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.324	1	J
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.331	1	J
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	102	86 - 118	PASS
1,2-Dichloroethane-d4	110	80 - 120	PASS
Toluene-d8	105	88 - 110	PASS
4-Bromofluorobenzene	107	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3681138
30-JUL-2014 14:28

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14071368 Prep Date: 07/25/14 11:09 Sample ID: WG485714-01
Instrument ID: HPMS8 Run Date: 07/25/14 11:09 Prep Method: 5030B/5030C/503
File ID: 8M398944 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG485714 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-14-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3681138
30-JUL-2014 14:28

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L14071368 Prep Date: 07/25/14 11:09 Sample ID: WG485714-01
Instrument ID: HPMS8 Run Date: 07/25/14 11:09 Prep Method: 5030B/5030C/503
File ID: 8M398944 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG485714 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-14-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	93.5	86 - 118	PASS
1,2-Dichloroethane-d4	98.1	80 - 120	PASS
Toluene-d8	95.0	88 - 110	PASS
4-Bromofluorobenzene	89.9	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3681138
30-JUL-2014 14:28

Login Number: L14071368 Run Date: 07/25/2014 Sample ID: WG485785-02
Instrument ID: HPMS11 Run Time: 18:30 Prep Method: 5030B/5030C/503
File ID: 11M02716 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG485785 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD65546 Cal ID: HPMS11-27-JUN-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	25.0	125	40 - 180	
Benzene	20.0	19.8	98.9	80 - 121	
Bromobenzene	20.0	18.8	94.0	80 - 120	
Bromochloromethane	20.0	20.5	102	65 - 130	
Bromodichloromethane	20.0	19.8	99.2	80 - 131	
Bromoform	20.0	23.5	117	70 - 130	
Bromomethane	20.0	17.2	85.8	30 - 145	
2-Butanone	20.0	25.4	127	10 - 170	
n-Butylbenzene	20.0	21.6	108	80 - 131	
sec-Butylbenzene	20.0	19.6	98.1	80 - 127	
tert-Butylbenzene	20.0	17.7	88.7	80 - 126	
Carbon disulfide	20.0	17.0	85.0	58 - 128	
Carbon tetrachloride	20.0	19.8	98.8	65 - 140	
Chlorobenzene	20.0	18.3	91.5	80 - 120	
Chlorodibromomethane	20.0	21.7	108	60 - 135	
Chloroethane	20.0	19.3	96.4	60 - 135	
2-Chloroethyl vinyl ether	20.0	18.8	93.8	45 - 160	
Chloroform	20.0	19.3	96.4	80 - 125	
Chloromethane	20.0	19.6	97.9	40 - 125	
2-Chlorotoluene	20.0	18.1	90.3	80 - 127	
4-Chlorotoluene	20.0	17.6	88.2	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	23.3	116	50 - 130	
1,2-Dibromoethane	20.0	21.2	106	80 - 129	
Dibromomethane	20.0	21.1	105	75 - 125	
1,2-Dichlorobenzene	20.0	18.5	92.7	80 - 125	
1,3-Dichlorobenzene	20.0	18.0	89.9	80 - 120	
1,4-Dichlorobenzene	20.0	19.3	96.3	80 - 120	
Dichlorodifluoromethane	20.0	25.4	127	40 - 160	
1,1-Dichloroethane	20.0	18.8	94.2	80 - 125	
1,2-Dichloroethane	20.0	20.3	101	80 - 129	
1,1-Dichloroethene	20.0	18.6	93.2	80 - 132	
cis-1,2-Dichloroethene	20.0	18.9	94.4	70 - 125	
trans-1,2-Dichloroethene	20.0	18.9	94.3	80 - 127	
1,2-Dichloropropane	20.0	19.4	96.8	80 - 120	
1,3-Dichloropropane	20.0	20.9	104	80 - 120	
2,2-Dichloropropane	20.0	17.2	85.8	80 - 133	
cis-1,3-Dichloropropene	20.0	21.2	106	70 - 130	
trans-1,3-Dichloropropene	20.0	20.5	103	80 - 130	
1,1-Dichloropropene	20.0	19.2	96.0	75 - 130	
Ethylbenzene	20.0	18.6	93.0	80 - 122	
2-Hexanone	20.0	26.7	134	55 - 130	*

LCS - Modified 03/06/2008
PDF File ID: 3680671
Report generated: 07/30/2014 14:28

Login Number: L14071368 Run Date: 07/25/2014 Sample ID: WG485785-02
Instrument ID: HPMS11 Run Time: 18:30 Prep Method: 5030B/5030C/503
File ID: 11M02716 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG485785 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD65546 Cal ID: HPMS11-27-JUN-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	19.1	95.6	72 - 132	
Isopropylbenzene	20.0	19.5	97.3	80 - 122	
p-Isopropyltoluene	20.0	19.8	99.1	80 - 122	
4-Methyl-2-pentanone	20.0	25.1	125	64 - 140	
Methylene chloride	20.0	18.6	92.8	80 - 123	
Naphthalene	20.0	19.7	98.6	59 - 149	
n-Propylbenzene	20.0	18.3	91.5	80 - 129	
Styrene	20.0	20.6	103	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	19.2	96.0	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	20.6	103	79 - 125	
Tetrachloroethene	20.0	18.5	92.4	80 - 124	
Toluene	20.0	20.3	102	80 - 124	
1,2,3-Trichlorobenzene	20.0	20.0	100	55 - 140	
1,2,4-Trichlorobenzene	20.0	18.4	92.2	65 - 135	
1,1,1-Trichloroethane	20.0	18.9	94.6	80 - 134	
1,1,2-Trichloroethane	20.0	21.2	106	80 - 125	
Trichloroethene	20.0	19.2	96.1	80 - 122	
Trichlorofluoromethane	20.0	21.0	105	62 - 151	
1,2,3-Trichloropropane	20.0	23.0	115	75 - 125	
1,2,4-Trimethylbenzene	20.0	21.2	106	80 - 125	
1,3,5-Trimethylbenzene	20.0	20.7	104	80 - 127	
Vinyl acetate	20.0	24.5	123	10 - 190	
Vinyl chloride	20.0	20.8	104	50 - 170	
o-Xylene	20.0	17.9	89.3	80 - 122	
m-,p-Xylene	40.0	38.9	97.2	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	95.7	86 - 118	PASS
1,2-Dichloroethane-d4	98.3	80 - 120	PASS
Toluene-d8	95.3	88 - 110	PASS
4-Bromofluorobenzene	90.7	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3680671
Report generated: 07/30/2014 14:28

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 07/24/2014 Sample ID: WG485369-02
Instrument ID: HPMS17 Run Time: 17:35 Prep Method: 5030B/5030C/503
File ID: 17M007078 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG485369 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD65567 Cal ID: HPMS17-09-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	27.6	138	40 - 180	
Benzene	20.0	21.1	106	80 - 121	
Bromobenzene	20.0	20.9	105	80 - 120	
Bromochloromethane	20.0	20.4	102	65 - 130	
Bromodichloromethane	20.0	21.1	105	80 - 131	
Bromoform	20.0	22.0	110	70 - 130	
Bromomethane	20.0	25.6	128	30 - 145	
2-Butanone	20.0	26.9	134	10 - 170	
n-Butylbenzene	20.0	24.9	125	80 - 131	
sec-Butylbenzene	20.0	21.7	108	80 - 127	
tert-Butylbenzene	20.0	19.9	99.4	80 - 126	
Carbon disulfide	20.0	14.6	73.1	58 - 128	
Carbon tetrachloride	20.0	21.9	110	65 - 140	
Chlorobenzene	20.0	19.1	95.3	80 - 120	
Chlorodibromomethane	20.0	21.3	106	60 - 135	
Chloroethane	20.0	36.1	180	60 - 135	*
2-Chloroethyl vinyl ether	20.0	24.3	121	45 - 160	
Chloroform	20.0	21.1	105	80 - 125	
Chloromethane	20.0	32.0	160	40 - 125	*
2-Chlorotoluene	20.0	20.9	104	80 - 127	
4-Chlorotoluene	20.0	20.3	102	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	23.7	119	50 - 130	
1,2-Dibromoethane	20.0	20.6	103	80 - 129	
Dibromomethane	20.0	22.4	112	75 - 125	
1,2-Dichlorobenzene	20.0	20.3	101	80 - 125	
1,3-Dichlorobenzene	20.0	19.8	99.0	80 - 120	
1,4-Dichlorobenzene	20.0	21.4	107	80 - 120	
Dichlorodifluoromethane	20.0	32.2	161	40 - 160	*
1,1-Dichloroethane	20.0	24.0	120	80 - 125	
1,2-Dichloroethane	20.0	24.9	124	80 - 129	
1,1-Dichloroethene	20.0	24.4	122	80 - 132	
cis-1,2-Dichloroethene	20.0	20.6	103	70 - 125	
trans-1,2-Dichloroethene	20.0	21.2	106	80 - 127	
1,2-Dichloropropane	20.0	24.6	123	80 - 120	*
1,3-Dichloropropane	20.0	21.4	107	80 - 120	
2,2-Dichloropropane	20.0	20.7	103	80 - 133	
cis-1,3-Dichloropropene	20.0	21.9	110	70 - 130	
trans-1,3-Dichloropropene	20.0	19.9	99.4	80 - 130	
1,1-Dichloropropene	20.0	21.2	106	75 - 130	
Ethylbenzene	20.0	20.7	104	80 - 122	
2-Hexanone	20.0	28.1	140	55 - 130	*

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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 07/24/2014 Sample ID: WG485369-02
Instrument ID: HPMS17 Run Time: 17:35 Prep Method: 5030B/5030C/503
File ID: 17M007078 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG485369 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD65567 Cal ID: HPMS17-09-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	21.5	108	72 - 132	
Isopropylbenzene	20.0	20.1	100	80 - 122	
p-Isopropyltoluene	20.0	21.2	106	80 - 122	
4-Methyl-2-pentanone	20.0	26.9	135	64 - 140	
Methylene chloride	20.0		0	80 - 123	*
Naphthalene	20.0	18.5	92.4	59 - 149	
n-Propylbenzene	20.0	21.2	106	80 - 129	
Styrene	20.0	21.0	105	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	20.4	102	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	22.2	111	79 - 125	
Tetrachloroethene	20.0	19.3	96.7	80 - 124	
Toluene	20.0	21.3	107	80 - 124	
1,2,3-Trichlorobenzene	20.0	21.2	106	55 - 140	
1,2,4-Trichlorobenzene	20.0	19.3	96.5	65 - 135	
1,1,1-Trichloroethane	20.0	21.1	106	80 - 134	
1,1,2-Trichloroethane	20.0	21.0	105	80 - 125	
Trichloroethene	20.0	19.9	99.7	80 - 122	
Trichlorofluoromethane	20.0	35.7	178	62 - 151	*
1,2,3-Trichloropropane	20.0	21.7	109	75 - 125	
1,2,4-Trimethylbenzene	20.0	22.8	114	80 - 125	
1,3,5-Trimethylbenzene	20.0	22.5	113	80 - 127	
Vinyl acetate	20.0	33.7	168	10 - 190	
Vinyl chloride	20.0	27.2	136	50 - 170	
o-Xylene	20.0	19.6	98.2	80 - 122	
m-,p-Xylene	40.0	41.7	104	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	105	86 - 118	PASS
1,2-Dichloroethane-d4	108	80 - 120	PASS
Toluene-d8	106	88 - 110	PASS
4-Bromofluorobenzene	103	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3680671
Report generated: 07/30/2014 14:28

Login Number: L14071368 Run Date: 07/25/2014 Sample ID: WG485714-02
Instrument ID: HPMS8 Run Time: 11:38 Prep Method: 5030B/5030C/503
File ID: 8M398945 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG485714 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD65546 Cal ID: HPMS8-14-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	22.1	110	40 - 180	
Benzene	20.0	19.0	94.9	80 - 121	
Bromobenzene	20.0	20.3	101	80 - 120	
Bromochloromethane	20.0	19.8	98.8	65 - 130	
Bromodichloromethane	20.0	20.5	102	80 - 131	
Bromoform	20.0	21.3	107	70 - 130	
Bromomethane	20.0	11.6	57.8	30 - 145	
2-Butanone	20.0	19.8	98.9	10 - 170	
n-Butylbenzene	20.0	19.8	99.0	80 - 131	
sec-Butylbenzene	20.0	19.7	98.7	80 - 127	
tert-Butylbenzene	20.0	19.5	97.5	80 - 126	
Carbon disulfide	20.0	17.5	87.3	58 - 128	
Carbon tetrachloride	20.0	22.9	114	65 - 140	
Chlorobenzene	20.0	19.3	96.4	80 - 120	
Chlorodibromomethane	20.0	20.8	104	60 - 135	
Chloroethane	20.0	19.6	98.0	60 - 135	
2-Chloroethyl vinyl ether	20.0	17.5	87.7	45 - 160	
Chloroform	20.0	20.8	104	80 - 125	
Chloromethane	20.0	19.2	95.9	40 - 125	
2-Chlorotoluene	20.0	20.0	99.8	80 - 127	
4-Chlorotoluene	20.0	18.9	94.5	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	21.7	108	50 - 130	
1,2-Dibromoethane	20.0	19.7	98.5	80 - 129	
Dibromomethane	20.0	20.1	100	75 - 125	
1,2-Dichlorobenzene	20.0	18.9	94.5	80 - 125	
1,3-Dichlorobenzene	20.0	19.1	95.6	80 - 120	
1,4-Dichlorobenzene	20.0	19.5	97.6	80 - 120	
Dichlorodifluoromethane	20.0	30.5	153	40 - 160	
1,1-Dichloroethane	20.0	19.3	96.5	80 - 125	
1,2-Dichloroethane	20.0	21.4	107	80 - 129	
1,1-Dichloroethene	20.0	19.5	97.7	80 - 132	
cis-1,2-Dichloroethene	20.0	20.3	102	70 - 125	
trans-1,2-Dichloroethene	20.0	20.7	103	80 - 127	
1,2-Dichloropropane	20.0	18.3	91.6	80 - 120	
1,3-Dichloropropane	20.0	18.5	92.3	80 - 120	
2,2-Dichloropropane	20.0	20.8	104	80 - 133	
cis-1,3-Dichloropropene	20.0	19.9	99.7	70 - 130	
trans-1,3-Dichloropropene	20.0	19.1	95.4	80 - 130	
1,1-Dichloropropene	20.0	20.5	102	75 - 130	
Ethylbenzene	20.0	20.7	103	80 - 122	
2-Hexanone	20.0	17.4	86.9	55 - 130	

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Login Number: L14071368 Run Date: 07/25/2014 Sample ID: WG485714-02
Instrument ID: HPMS8 Run Time: 11:38 Prep Method: 5030B/5030C/503
File ID: 8M398945 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG485714 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD65546 Cal ID: HPMS8-14-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	22.1	110	72 - 132	
Isopropylbenzene	20.0	20.4	102	80 - 122	
p-Isopropyltoluene	20.0	19.7	98.7	80 - 122	
4-Methyl-2-pentanone	20.0	16.9	84.7	64 - 140	
Methylene chloride	20.0	19.0	95.0	80 - 123	
Naphthalene	20.0	21.0	105	59 - 149	
n-Propylbenzene	20.0	19.2	96.2	80 - 129	
Styrene	20.0	21.1	106	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	21.5	108	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	17.5	87.4	79 - 125	
Tetrachloroethene	20.0	21.0	105	80 - 124	
Toluene	20.0	20.7	103	80 - 124	
1,2,3-Trichlorobenzene	20.0	22.0	110	55 - 140	
1,2,4-Trichlorobenzene	20.0	20.4	102	65 - 135	
1,1,1-Trichloroethane	20.0	22.6	113	80 - 134	
1,1,2-Trichloroethane	20.0	19.8	99.2	80 - 125	
Trichloroethene	20.0	20.8	104	80 - 122	
Trichlorofluoromethane	20.0	25.2	126	62 - 151	
1,2,3-Trichloropropane	20.0	20.0	100	75 - 125	
1,2,4-Trimethylbenzene	20.0	21.3	107	80 - 125	
1,3,5-Trimethylbenzene	20.0	22.0	110	80 - 127	
Vinyl acetate	20.0	22.0	110	10 - 190	
Vinyl chloride	20.0	23.0	115	50 - 170	
o-Xylene	20.0	19.9	99.3	80 - 122	
m-,p-Xylene	40.0	41.0	102	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	94.6	86 - 118	PASS
1,2-Dichloroethane-d4	98.6	80 - 120	PASS
Toluene-d8	95.7	88 - 110	PASS
4-Bromofluorobenzene	91.2	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3680671
Report generated: 07/30/2014 14:28

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Analyst: FJB Prep Method: 5030B/5030C/503
Instrument ID: HPMS17 Matrix: Water Method: 8260B
Workgroup (AAB#): WG485369 Units: ug/L
QC Key: STD Lot #: STD65567

Sample ID: WG485369-02 LCS File ID: 17M007078 Run Date: 07/24/2014 17:35
Sample ID: WG485369-03 LCS2 File ID: 17M007079 Run Date: 07/24/2014 17:55

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	20.4	102	20.0	20.2	101	1.22	80 - 130	20	
1,1,1-Trichloroethane	20.0	21.1	106	20.0	20.6	103	2.33	80 - 134	20	
1,1,2,2-Tetrachloroethane	20.0	22.2	111	20.0	20.7	103	6.87	79 - 125	20	
1,1,2-Trichloroethane	20.0	21.0	105	20.0	20.3	101	3.25	80 - 125	20	
1,1-Dichloroethane	20.0	24.0	120	20.0	23.3	116	3.17	80 - 125	20	
1,1-Dichloroethene	20.0	24.4	122	20.0	23.5	118	3.57	80 - 132	20	
1,1-Dichloropropene	20.0	21.2	106	20.0	20.9	104	1.49	75 - 130	20	
1,2,3-Trichlorobenzene	20.0	21.2	106	20.0	19.8	98.9	6.71	55 - 140	20	
1,2,3-Trichloropropane	20.0	21.7	109	20.0	20.3	102	6.59	75 - 125	20	
1,2,4-Trichlorobenzene	20.0	19.3	96.5	20.0	17.9	89.4	7.64	65 - 135	20	
1,2,4-Trimethylbenzene	20.0	22.8	114	20.0	20.9	104	8.70	80 - 125	20	
1,2-Dibromo-3-chloropropane	20.0	23.7	119	20.0	22.6	113	4.60	50 - 130	20	
1,2-Dibromoethane	20.0	20.6	103	20.0	20.4	102	0.983	80 - 129	20	
1,2-Dichlorobenzene	20.0	20.3	101	20.0	18.6	93.1	8.51	80 - 125	20	
1,2-Dichloroethane	20.0	24.9	124	20.0	25.0	125	0.441	80 - 129	20	
1,2-Dichloropropane	20.0	24.6	123	20.0	24.0	120	2.71	80 - 120	20	*
1,3,5-Trimethylbenzene	20.0	22.5	113	20.0	20.7	104	8.39	80 - 127	20	
1,3-Dichlorobenzene	20.0	19.8	99.0	20.0	18.2	91.0	8.47	80 - 120	20	
1,3-Dichloropropane	20.0	21.4	107	20.0	21.0	105	2.10	80 - 120	20	
1,4-Dichlorobenzene	20.0	21.4	107	20.0	19.8	99.0	7.69	80 - 120	20	
2,2-Dichloropropane	20.0	20.7	103	20.0	19.9	99.5	3.86	80 - 133	20	
2-Butanone	20.0	26.9	134	20.0	27.3	137	1.60	10 - 170	20	
2-Chloroethyl vinyl ether	20.0	24.3	121	20.0	23.9	119	1.59	45 - 160	20	
2-Chlorotoluene	20.0	20.9	104	20.0	19.1	95.3	9.16	80 - 127	20	
2-Hexanone	20.0	28.1	140	20.0	27.7	138	1.41	55 - 130	20	*
4-Chlorotoluene	20.0	20.3	102	20.0	18.7	93.6	8.23	80 - 126	20	
4-Methyl-2-pentanone	20.0	26.9	135	20.0	26.8	134	0.570	64 - 140	20	
Acetone	20.0	27.6	138	20.0	27.6	138	0.0634	40 - 180	20	
Benzene	20.0	21.1	106	20.0	20.6	103	2.35	80 - 121	20	
Bromobenzene	20.0	20.9	105	20.0	19.1	95.6	8.87	80 - 120	20	
Bromochloromethane	20.0	20.4	102	20.0	20.3	102	0.156	65 - 130	20	
Bromodichloromethane	20.0	21.1	105	20.0	20.9	105	0.818	80 - 131	20	
Bromoform	20.0	22.0	110	20.0	21.0	105	4.59	70 - 130	20	
Bromomethane	20.0	25.6	128	20.0	25.1	126	1.67	30 - 145	20	
Carbon disulfide	20.0	14.6	73.1	20.0	14.3	71.4	2.30	58 - 128	20	
Carbon tetrachloride	20.0	21.9	110	20.0	21.1	106	3.73	65 - 140	20	
Chlorobenzene	20.0	19.1	95.3	20.0	18.7	93.4	2.06	80 - 120	20	
Chloroethane	20.0	36.1	180	20.0	34.9	174	3.39	60 - 135	20	*
Chloroform	20.0	21.1	105	20.0	20.5	103	2.47	80 - 125	20	
Chloromethane	20.0	32.0	160	20.0	31.4	157	2.00	40 - 125	20	*

LCS_LCS2 - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Analyst: FJB Prep Method: 5030B/5030C/503
Instrument ID: HPMS17 Matrix: Water Method: 8260B
Workgroup (AAB#): WG485369 Units: ug/L
QC Key: STD Lot #: STD65567

Sample ID: WG485369-02 LCS File ID: 17M007078 Run Date: 07/24/2014 17:35
Sample ID: WG485369-03 LCS2 File ID: 17M007079 Run Date: 07/24/2014 17:55

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,2-Dichloroethene	20.0	20.6	103	20.0	20.8	104	0.680	70 - 125	20	
cis-1,3-Dichloropropene	20.0	21.9	110	20.0	21.5	107	2.17	70 - 130	20	
Chlorodibromomethane	20.0	21.3	106	20.0	20.5	102	3.90	60 - 135	20	
Dibromomethane	20.0	22.4	112	20.0	21.9	109	2.42	75 - 125	20	
Dichlorodifluoromethane	20.0	32.2	161	20.0	31.7	159	1.54	40 - 160	20	*
Ethylbenzene	20.0	20.7	104	20.0	20.2	101	2.62	80 - 122	20	
Hexachlorobutadiene	20.0	21.5	108	20.0	19.9	99.5	7.88	72 - 132	20	
Isopropylbenzene	20.0	20.1	100	20.0	19.2	96.0	4.54	80 - 122	20	
m-,p-Xylene	40.0	41.7	104	40.0	39.7	99.3	4.95	80 - 122	20	
Methylene chloride	20.0	0.00	0.00	20.0	20.2	101	0.00	80 - 123	20	*
n-Butylbenzene	20.0	24.9	125	20.0	22.7	113	9.48	80 - 131	20	
n-Propylbenzene	20.0	21.2	106	20.0	19.6	98.0	7.99	80 - 129	20	
Naphthalene	20.0	18.5	92.4	20.0	17.2	86.2	6.98	59 - 149	20	
o-Xylene	20.0	19.6	98.2	20.0	19.0	94.8	3.49	80 - 122	20	
p-Isopropyltoluene	20.0	21.2	106	20.0	19.2	96.1	9.78	80 - 122	20	
sec-Butylbenzene	20.0	21.7	108	20.0	19.8	99.2	8.93	80 - 127	20	
Styrene	20.0	21.0	105	20.0	20.0	99.9	5.14	80 - 123	20	
tert-Butylbenzene	20.0	19.9	99.4	20.0	18.1	90.4	9.55	80 - 126	20	
Tetrachloroethene	20.0	19.3	96.7	20.0	18.8	93.9	2.98	80 - 124	20	
Toluene	20.0	21.3	107	20.0	20.4	102	4.56	80 - 124	20	
trans-1,2-Dichloroethene	20.0	21.2	106	20.0	21.0	105	1.09	80 - 127	20	
trans-1,3-Dichloropropene	20.0	19.9	99.4	20.0	20.2	101	1.62	80 - 130	20	
Trichloroethene	20.0	19.9	99.7	20.0	18.9	94.5	5.35	80 - 122	20	
Trichlorofluoromethane	20.0	35.7	178	20.0	34.3	172	3.85	62 - 151	20	*
Vinyl acetate	20.0	33.7	168	20.0	34.8	174	3.23	10 - 190	20	
Vinyl chloride	20.0	27.2	136	20.0	26.6	133	2.34	50 - 170	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	108	109	80 - 120	PASS
Dibromofluoromethane	105	106	86 - 118	PASS
4-Bromofluorobenzene	103	97.8	86 - 115	PASS
Toluene-d8	106	104	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Analyst: FJB Prep Method: 5030B/5030C/503
Instrument ID: HPMS11 Matrix: Water Method: 8260B
Workgroup (AAB#): WG485785 Units: ug/L
QC Key: STD Lot #: STD65546

Sample ID: WG485785-02 LCS File ID: 11M02716 Run Date: 07/25/2014 18:30
Sample ID: WG485785-03 LCS2 File ID: 11M02717 Run Date: 07/25/2014 19:02

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,1,1,2-Tetrachloroethane	20.0	19.2	96.0	20.0	19.2	95.8	0.191	80 - 130	20	
1,1,1-Trichloroethane	20.0	18.9	94.6	20.0	19.2	96.0	1.45	80 - 134	20	
1,1,2,2-Tetrachloroethane	20.0	20.6	103	20.0	20.9	104	1.09	79 - 125	20	
1,1,2-Trichloroethane	20.0	21.2	106	20.0	21.3	106	0.294	80 - 125	20	
1,1-Dichloroethane	20.0	18.8	94.2	20.0	19.0	95.1	0.910	80 - 125	20	
1,1-Dichloroethene	20.0	18.6	93.2	20.0	18.6	92.9	0.392	80 - 132	20	
1,1-Dichloropropene	20.0	19.2	96.0	20.0	19.1	95.5	0.491	75 - 130	20	
1,2,3-Trichlorobenzene	20.0	20.0	100	20.0	19.8	99.0	1.03	55 - 140	20	
1,2,3-Trichloropropane	20.0	23.0	115	20.0	22.3	111	3.04	75 - 125	20	
1,2,4-Trichlorobenzene	20.0	18.4	92.2	20.0	18.5	92.3	0.0208	65 - 135	20	
1,2,4-Trimethylbenzene	20.0	21.2	106	20.0	21.0	105	0.871	80 - 125	20	
1,2-Dibromo-3-chloropropane	20.0	23.3	116	20.0	24.5	123	5.18	50 - 130	20	
1,2-Dibromoethane	20.0	21.2	106	20.0	21.5	107	1.61	80 - 129	20	
1,2-Dichlorobenzene	20.0	18.5	92.7	20.0	18.7	93.6	0.947	80 - 125	20	
1,2-Dichloroethane	20.0	20.3	101	20.0	20.4	102	0.385	80 - 129	20	
1,2-Dichloropropane	20.0	19.4	96.8	20.0	19.5	97.7	0.940	80 - 120	20	
1,3,5-Trimethylbenzene	20.0	20.7	104	20.0	20.8	104	0.106	80 - 127	20	
1,3-Dichlorobenzene	20.0	18.0	89.9	20.0	17.6	88.0	2.21	80 - 120	20	
1,3-Dichloropropane	20.0	20.9	104	20.0	20.8	104	0.476	80 - 120	20	
1,4-Dichlorobenzene	20.0	19.3	96.3	20.0	19.1	95.6	0.789	80 - 120	20	
2,2-Dichloropropane	20.0	17.2	85.8	20.0	16.9	84.7	1.22	80 - 133	20	
2-Butanone	20.0	25.4	127	20.0	26.2	131	3.45	10 - 170	20	
2-Chloroethyl vinyl ether	20.0	18.8	93.8	20.0	19.5	97.6	3.98	45 - 160	20	
2-Chlorotoluene	20.0	18.1	90.3	20.0	18.1	90.5	0.200	80 - 127	20	
2-Hexanone	20.0	26.7	134	20.0	26.9	135	0.747	55 - 130	20	*
4-Chlorotoluene	20.0	17.6	88.2	20.0	17.8	89.1	0.970	80 - 126	20	
4-Methyl-2-pentanone	20.0	25.1	125	20.0	25.6	128	2.16	64 - 140	20	
Acetone	20.0	25.0	125	20.0	26.5	132	5.89	40 - 180	20	
Benzene	20.0	19.8	98.9	20.0	19.8	99.0	0.172	80 - 121	20	
Bromobenzene	20.0	18.8	94.0	20.0	18.5	92.6	1.53	80 - 120	20	
Bromochloromethane	20.0	20.5	102	20.0	20.0	100	2.21	65 - 130	20	
Bromodichloromethane	20.0	19.8	99.2	20.0	19.6	97.9	1.33	80 - 131	20	
Bromoform	20.0	23.5	117	20.0	23.2	116	0.870	70 - 130	20	
Bromomethane	20.0	17.2	85.8	20.0	17.8	88.9	3.53	30 - 145	20	
Carbon disulfide	20.0	17.0	85.0	20.0	16.8	83.9	1.36	58 - 128	20	
Carbon tetrachloride	20.0	19.8	98.8	20.0	20.0	100	1.14	65 - 140	20	
Chlorobenzene	20.0	18.3	91.5	20.0	18.2	90.9	0.675	80 - 120	20	
Chloroethane	20.0	19.3	96.4	20.0	19.4	96.8	0.374	60 - 135	20	
Chloroform	20.0	19.3	96.4	20.0	19.3	96.7	0.358	80 - 125	20	
Chloromethane	20.0	19.6	97.9	20.0	20.1	100	2.49	40 - 125	20	

LCS_LCS2 - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Analyst: FJB Prep Method: 5030B/5030C/503
Instrument ID: HPMS11 Matrix: Water Method: 8260B
Workgroup (AAB#): WG485785 Units: ug/L
QC Key: STD Lot #: STD65546

Sample ID: WG485785-02 LCS File ID: 11M02716 Run Date: 07/25/2014 18:30
Sample ID: WG485785-03 LCS2 File ID: 11M02717 Run Date: 07/25/2014 19:02

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
cis-1,2-Dichloroethene	20.0	18.9	94.4	20.0	19.1	95.6	1.29	70 - 125	20	
cis-1,3-Dichloropropene	20.0	21.2	106	20.0	20.9	104	1.41	70 - 130	20	
Chlorodibromomethane	20.0	21.7	108	20.0	21.7	109	0.237	60 - 135	20	
Dibromomethane	20.0	21.1	105	20.0	21.0	105	0.583	75 - 125	20	
Dichlorodifluoromethane	20.0	25.4	127	20.0	25.7	129	1.20	40 - 160	20	
Ethylbenzene	20.0	18.6	93.0	20.0	18.7	93.3	0.377	80 - 122	20	
Hexachlorobutadiene	20.0	19.1	95.6	20.0	19.0	95.1	0.491	72 - 132	20	
Isopropylbenzene	20.0	19.5	97.3	20.0	19.6	98.2	0.875	80 - 122	20	
m-,p-Xylene	40.0	38.9	97.2	40.0	39.0	97.5	0.304	80 - 122	20	
Methylene chloride	20.0	18.6	92.8	20.0	18.4	92.0	0.829	80 - 123	20	
n-Butylbenzene	20.0	21.6	108	20.0	21.6	108	0.0367	80 - 131	20	
n-Propylbenzene	20.0	18.3	91.5	20.0	18.2	90.9	0.683	80 - 129	20	
Naphthalene	20.0	19.7	98.6	20.0	19.8	98.8	0.198	59 - 149	20	
o-Xylene	20.0	17.9	89.3	20.0	17.8	89.2	0.0734	80 - 122	20	
p-Isopropyltoluene	20.0	19.8	99.1	20.0	19.7	98.5	0.640	80 - 122	20	
sec-Butylbenzene	20.0	19.6	98.1	20.0	19.7	98.6	0.537	80 - 127	20	
Styrene	20.0	20.6	103	20.0	20.9	104	1.11	80 - 123	20	
tert-Butylbenzene	20.0	17.7	88.7	20.0	17.9	89.4	0.846	80 - 126	20	
Tetrachloroethene	20.0	18.5	92.4	20.0	18.8	94.0	1.76	80 - 124	20	
Toluene	20.0	20.3	102	20.0	20.4	102	0.606	80 - 124	20	
trans-1,2-Dichloroethene	20.0	18.9	94.3	20.0	18.8	94.0	0.338	80 - 127	20	
trans-1,3-Dichloropropene	20.0	20.5	103	20.0	20.6	103	0.434	80 - 130	20	
Trichloroethene	20.0	19.2	96.1	20.0	19.3	96.7	0.603	80 - 122	20	
Trichlorofluoromethane	20.0	21.0	105	20.0	20.6	103	1.71	62 - 151	20	
Vinyl acetate	20.0	24.5	123	20.0	23.6	118	3.67	10 - 190	20	
Vinyl chloride	20.0	20.8	104	20.0	19.1	95.6	8.54	50 - 170	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	98.3	99.9	80 - 120	PASS
Dibromofluoromethane	95.7	97.3	86 - 118	PASS
4-Bromofluorobenzene	90.7	92.3	86 - 115	PASS
Toluene-d8	95.3	96.4	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14071368 Cal ID: HPMS8- 14-JUL-14 Worknum: WG485714

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14071368-05 File ID: 8M398954 Dil: 1 Method: 5035A

Sample ID: L14071368-06 MS File ID: 8M398946 Dil: 1 Matrix: 8260B

Sample ID: L14071368-07 MSD File ID: 8M398947 Dil: 1 Units: Water ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	21.5	107	20.0	21.1	105	1.89	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	22.1	111	20.0	21.6	108	2.19	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	17.6	88.2	20.0	18.8	94.1	6.44	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	19.2	95.8	20.0	19.9	99.6	3.97	80 - 125	20	
1,1-Dichloroethane	ND	20.0	18.6	93.1	20.0	18.8	93.9	0.829	80 - 125	20	
1,1-Dichloroethene	ND	20.0	18.9	94.3	20.0	19.0	95.2	1.01	80 - 132	20	
1,1-Dichloropropene	ND	20.0	20.0	100	20.0	19.3	96.6	3.50	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	21.7	108	20.0	21.8	109	0.489	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	20.3	101	20.0	20.8	104	2.84	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	21.3	107	20.0	20.8	104	2.25	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	21.4	107	20.0	20.6	103	4.06	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	19.7	98.7	20.0	20.9	105	5.80	50 - 130	20	
1,2-Dibromoethane	ND	20.0	19.7	98.7	20.0	20.4	102	3.25	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	19.2	96.2	20.0	18.8	93.8	2.53	80 - 125	20	
1,2-Dichloroethane	ND	20.0	20.4	102	20.0	21.4	107	4.71	80 - 129	20	
1,2-Dichloropropane	ND	20.0	18.0	89.8	20.0	18.4	91.8	2.21	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	22.2	111	20.0	21.1	105	5.05	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	19.0	95	20.0	18.7	93.4	1.71	80 - 120	20	
1,3-Dichloropropane	ND	20.0	18.3	91.6	20.0	19.0	95.1	3.81	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	20.3	102	20.0	19.4	96.9	4.78	80 - 120	20	
2,2-Dichloropropane	ND	20.0	21.1	106	20.0	20.6	103	2.75	80 - 133	20	
2-Butanone	ND	20.0	19.2	96	20.0	21.4	107	11.0	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	3.95	19.8	20.0	0	0	200	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	20.7	104	20.0	18.9	94.5	9.09	80 - 127	20	
2-Hexanone	ND	20.0	17.2	86.1	20.0	18.7	93.6	8.35	55 - 130	20	
4-Chlorotoluene	ND	20.0	18.1	90.3	20.0	18.1	90.5	0.126	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	16.5	82.4	20.0	17.6	88	6.56	64 - 140	20	
Acetone	ND	20.0	20.1	100	20.0	23.1	115	13.9	40 - 180	20	
Benzene	ND	20.0	18.8	93.8	20.0	18.7	93.3	0.538	80 - 121	20	
Bromobenzene	ND	20.0	20.5	102	20.0	20.1	101	1.76	80 - 120	20	
Bromochloromethane	ND	20.0	19.2	96.1	20.0	19.8	99.2	3.10	65 - 130	20	
Bromodichloromethane	ND	20.0	20.1	100	20.0	20.3	101	1.12	80 - 131	20	
Bromoform	ND	20.0	20.8	104	20.0	21.3	106	2.57	70 - 130	20	
Bromomethane	ND	20.0	12.5	62.3	20.0	13.0	65	4.14	30 - 145	20	
Carbon disulfide	ND	20.0	16.2	81.1	20.0	16.9	84.3	3.91	58 - 128	20	
Carbon tetrachloride	ND	20.0	21.9	110	20.0	21.2	106	3.44	65 - 140	20	
Chlorobenzene	ND	20.0	18.8	94.2	20.0	18.5	92.6	1.72	80 - 120	20	
Chloroethane	ND	20.0	18.7	93.4	20.0	18.6	93	0.377	60 - 135	20	
Chloroform	ND	20.0	20.4	102	20.0	20.1	101	1.02	80 - 125	20	
Chloromethane	ND	20.0	19.2	96.2	20.0	19.1	95.3	0.995	40 - 125	20	
cis-1,2-Dichloroethene	ND	20.0	20.0	100	20.0	19.8	99.2	0.995	70 - 125	20	

MS_MSD - Modified 03/06/2008

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14071368 Cal ID: HPMS8 14-JUL-14 Worknum: WG485714

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14071368-05 File ID: 8M398954 Dil: 1 Method: 5035A

Sample ID: L14071368-06 MS File ID: 8M398946 Dil: 1 Matrix: 8260B

Sample ID: L14071368-07 MSD File ID: 8M398947 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	19.5	97.3	20.0	20.2	101	3.76	70 - 130	20	
Chlorodibromomethane	ND	20.0	20.8	104	20.0	21.4	107	3.12	60 - 135	20	
Dibromomethane	ND	20.0	19.7	98.4	20.0	21.0	105	6.44	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	29.5	147	20.0	28.6	143	3.09	50 - 160	20	
Ethylbenzene	ND	20.0	20.3	102	20.0	19.5	97.5	4.19	80 - 122	20	
Hexachlorobutadiene	ND	20.0	22.5	113	20.0	22.1	111	1.65	72 - 132	20	
Isopropylbenzene	ND	20.0	19.9	99.5	20.0	19.1	95.7	3.86	80 - 122	20	
m-,p-Xylene	ND	40.0	39.6	99.1	40.0	38.7	96.7	2.42	80 - 122	20	
Methylene chloride	ND	20.0	18.6	93.1	20.0	18.8	94.1	1.06	80 - 123	20	
n-Butylbenzene	ND	20.0	20.3	101	20.0	19.2	96	5.32	80 - 131	20	
n-Propylbenzene	ND	20.0	19.4	96.9	20.0	18.5	92.5	4.63	80 - 129	20	
Naphthalene	ND	20.0	21.7	109	20.0	22.2	111	2.24	59 - 149	20	
o-Xylene	ND	20.0	19.2	96.1	20.0	19.0	95.1	1.06	80 - 122	20	
p-Isopropyltoluene	ND	20.0	19.7	98.6	20.0	18.7	93.5	5.28	80 - 122	20	
sec-Butylbenzene	ND	20.0	19.7	98.3	20.0	18.8	93.8	4.71	80 - 127	20	
Styrene	ND	20.0	20.6	103	20.0	20.2	101	1.88	80 - 123	20	
tert-Butylbenzene	ND	20.0	20.1	100	20.0	18.7	93.5	7.00	80 - 126	20	
Tetrachloroethene	1.87	20.0	21.9	100	20.0	21.2	96.6	3.36	80 - 124	20	
Toluene	ND	20.0	20.0	100	20.0	19.3	96.7	3.45	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	19.7	98.7	20.0	19.9	99.4	0.678	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	19.0	95.1	20.0	19.4	97.1	2.10	80 - 130	20	
Trichloroethene	2.81	20.0	22.1	96.6	20.0	22.1	96.6	0.0201	80 - 122	20	
Trichlorofluoromethane	ND	20.0	24.0	120	20.0	23.6	118	1.42	62 - 151	20	
Vinyl acetate	ND	20.0	23.7	118	20.0	25.4	127	7.12	10 - 190	20	
Vinyl chloride	ND	20.0	22.7	113	20.0	21.8	109	3.99	50 - 170	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3680672

Report generated 07/30/2014 14:28

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14071368 Cal ID: HPMS8- 14-JUL-14 Worknum: WG485714

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14071368-22 File ID: 8M398956 Dil: 1 Method: 5035A

Sample ID: L14071368-23 MS File ID: 8M398948 Dil: 1 Matrix: 8260B

Sample ID: L14071368-24 MSD File ID: 8M398949 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	20.2	101	20.0	20.1	101	0.588	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	20.5	102	20.0	20.4	102	0.177	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	17.9	89.5	20.0	18.4	91.8	2.49	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	19.1	95.7	20.0	19.2	95.9	0.230	80 - 125	20	
1,1-Dichloroethane	0.265	20.0	18.1	89.2	20.0	18.4	90.8	1.79	80 - 125	20	
1,1-Dichloroethene	0.808	20.0	18.4	87.8	20.0	18.3	87.5	0.298	80 - 132	20	
1,1-Dichloropropene	ND	20.0	18.1	90.7	20.0	18.3	91.3	0.708	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	21.3	107	20.0	21.2	106	0.475	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	21.3	106	20.0	20.7	103	2.84	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	19.8	99.2	20.0	20.0	100	0.942	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	19.4	97.1	20.0	19.5	97.7	0.569	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	19.6	98.1	20.0	20.7	103	5.31	50 - 130	20	
1,2-Dibromoethane	ND	20.0	19.6	97.9	20.0	19.4	96.9	1.01	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	17.6	88.2	20.0	18.0	90.2	2.19	80 - 125	20	
1,2-Dichloroethane	ND	20.0	20.8	104	20.0	20.7	103	0.446	80 - 129	20	
1,2-Dichloropropane	ND	20.0	17.7	88.7	20.0	17.8	89.1	0.441	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	19.6	98.2	20.0	20.0	99.8	1.64	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	17.7	88.3	20.0	18.1	90.3	2.31	80 - 120	20	
1,3-Dichloropropane	ND	20.0	18.1	90.6	20.0	18.4	91.9	1.43	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	18.4	92	20.0	18.7	93.7	1.78	80 - 120	20	
2,2-Dichloropropane	ND	20.0	19.6	98.2	20.0	19.7	98.7	0.452	80 - 133	20	
2-Butanone	ND	20.0	20.4	102	20.0	20.2	101	0.751	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	18.7	93.3	20.0	18.0	90.1	3.57	80 - 127	20	
2-Hexanone	ND	20.0	18.2	90.8	20.0	17.9	89.5	1.41	55 - 130	20	
4-Chlorotoluene	ND	20.0	15.9	79.3	20.0	17.3	86.4	8.48	80 - 126	20	*
4-Methyl-2-pentanone	ND	20.0	17.7	88.4	20.0	17.7	88.6	0.266	64 - 140	20	
Acetone	ND	20.0	22.5	113	20.0	24.0	120	6.40	40 - 180	20	
Benzene	ND	20.0	18.0	89.9	20.0	17.8	88.8	1.25	80 - 121	20	
Bromobenzene	ND	20.0	19.0	95	20.0	19.8	99	4.06	80 - 120	20	
Bromochloromethane	ND	20.0	19.4	97.1	20.0	19.7	98.4	1.36	65 - 130	20	
Bromodichloromethane	ND	20.0	19.3	96.7	20.0	19.9	99.3	2.70	80 - 131	20	
Bromoform	ND	20.0	20.6	103	20.0	21.0	105	1.73	70 - 130	20	
Bromomethane	ND	20.0	12.7	63.7	20.0	13.4	67.2	5.27	30 - 145	20	
Carbon disulfide	ND	20.0	15.8	79	20.0	15.7	78.6	0.554	58 - 128	20	
Carbon tetrachloride	ND	20.0	20.0	99.9	20.0	19.8	99.2	0.626	65 - 140	20	
Chlorobenzene	ND	20.0	17.6	88	20.0	17.9	89.4	1.54	80 - 120	20	
Chloroethane	ND	20.0	17.8	88.9	20.0	17.7	88.3	0.733	60 - 135	20	
Chloroform	ND	20.0	19.3	96.7	20.0	19.2	96	0.807	80 - 125	20	
Chloromethane	ND	20.0	18.1	90.3	20.0	17.7	88.4	2.09	40 - 125	20	
cis-1,2-Dichloroethene	0.348	20.0	19.6	96.4	20.0	19.9	97.6	1.22	70 - 125	20	

MS_MSD - Modified 03/06/2008

PDF File ID: 3680672

Report generated 07/30/2014 14:28

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14071368 Cal ID: HPMS8 14-JUL-14 Worknum: WG485714

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14071368-22 File ID: 8M398956 Dil: 1 Method: 5035A

Sample ID: L14071368-23 MS File ID: 8M398948 Dil: 1 Matrix: 8260B

Sample ID: L14071368-24 MSD File ID: 8M398949 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	19.3	96.6	20.0	19.6	98	1.52	70 - 130	20	
Chlorodibromomethane	ND	20.0	20.6	103	20.0	21.4	107	4.16	60 - 135	20	
Dibromomethane	ND	20.0	19.9	99.7	20.0	20.2	101	1.08	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	26.0	130	20.0	25.6	128	1.38	50 - 160	20	
Ethylbenzene	ND	20.0	18.5	92.4	20.0	18.5	92.6	0.120	80 - 122	20	
Hexachlorobutadiene	ND	20.0	19.7	98.7	20.0	20.3	102	2.99	72 - 132	20	
Isopropylbenzene	ND	20.0	18.1	90.4	20.0	18.4	92.2	2.04	80 - 122	20	
m-,p-Xylene	ND	40.0	36.7	91.7	40.0	36.6	91.4	0.290	80 - 122	20	
Methylene chloride	ND	20.0	18.4	91.9	20.0	18.8	94.1	2.45	80 - 123	20	
n-Butylbenzene	ND	20.0	18.0	90.1	20.0	18.2	90.9	0.888	80 - 131	20	
n-Propylbenzene	ND	20.0	17.4	86.8	20.0	17.4	87.1	0.289	80 - 129	20	
Naphthalene	ND	20.0	21.2	106	20.0	21.8	109	2.67	59 - 149	20	
o-Xylene	ND	20.0	18.0	89.8	20.0	18.1	90.5	0.737	80 - 122	20	
p-Isopropyltoluene	ND	20.0	17.7	88.3	20.0	17.9	89.7	1.47	80 - 122	20	
sec-Butylbenzene	ND	20.0	17.5	87.5	20.0	17.9	89.3	2.00	80 - 127	20	
Styrene	ND	20.0	19.3	96.4	20.0	19.5	97.5	1.21	80 - 123	20	
tert-Butylbenzene	ND	20.0	17.5	87.3	20.0	17.8	88.8	1.74	80 - 126	20	
Tetrachloroethene	31.8	20.0	42.1	51.7	20.0	41.4	47.9	1.84	80 - 124	20	*
Toluene	ND	20.0	18.5	92.5	20.0	18.4	91.9	0.582	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	18.9	94.6	20.0	19.1	95.4	0.848	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	18.8	93.9	20.0	18.5	92.7	1.37	80 - 130	20	
Trichloroethene	5.20	20.0	22.5	86.6	20.0	22.6	87.2	0.471	80 - 122	20	
Trichlorofluoromethane	ND	20.0	22.4	112	20.0	22.5	112	0.511	62 - 151	20	
Vinyl acetate	ND	20.0	25.2	126	20.0	25.1	126	0.102	10 - 190	20	
Vinyl chloride	ND	20.0	20.5	103	20.0	20.6	103	0.562	50 - 170	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3680672

Report generated 07/30/2014 14:28

METHOD BLANK SUMMARY

Login Number:	L14071368	Work Group:	WG486326
Blank File ID:	P2.073014.112919	Blank Sample ID:	WG486260-02
Prep Date:	07/30/14 07:30	Instrument ID:	PE-ICP2
Analyzed Date:	07/30/14 11:29	Method:	6010B
Analyst:	JYH		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG486260-03	P2.073014.113241	07/30/14 11:32	01
MW 1-1 D	L14071368-02	P2.073014.113603	07/30/14 11:36	01
MW 1-2	L14071368-03	P2.073014.124030	07/30/14 12:40	01
MW 1-3	L14071368-04	P2.073014.124356	07/30/14 12:43	01

Report Name: BLANK_SUMMARY
PDF File ID: 3685484
Report generated 07/30/2014 14:31

METHOD BLANK SUMMARY

Login Number: L14071368
Work Group: WG485928
Blank File ID: T2.072814.190057
Blank Sample ID: WG485858-02
Prep Date: 07/28/14 08:17
Instrument ID: ICP-THERMO2
Analyzed Date: 07/28/14 19:00
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG485858-03	T2.072814.190428	07/28/14 19:04	01
MW 2-1	L14071368-05	T2.072814.194141	07/28/14 19:41	01
MW 2-1 MS	L14071368-06	T2.072814.194508	07/28/14 19:45	01
MW 2-1 MSD	L14071368-07	T2.072814.194819	07/28/14 19:48	01

Report Name: BLANK_SUMMARY
PDF File ID: 3681914
Report generated 08/04/2014 10:25

METHOD BLANK SUMMARY

Login Number:	L14071368	Work Group:	WG486151
Blank File ID:	T2.073014.111959	Blank Sample ID:	WG486073-02
Prep Date:	07/29/14 08:45	Instrument ID:	ICP-THERMO2
Analyzed Date:	07/30/14 11:19	Method:	6010B
Analyst:	KHR		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG486073-03	T2.073014.112332	07/30/14 11:23	01
MW 1-1	L14071368-01	T2.073014.113351	07/30/14 11:33	01

Report Name: BLANK_SUMMARY
PDF File ID: 3681914
Report generated 08/04/2014 10:25

METHOD BLANK SUMMARY

Login Number: L14071368
Blank File ID: T2.080114.102136
Prep Date: 07/30/14 12:46
Analyzed Date: 08/01/14 10:21
Analyst: QX

Work Group: WG486423
Blank Sample ID: WG486376-02
Instrument ID: ICP-THERMO2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG486376-03	T2.080114.102510	08/01/14 10:25	01
MW 2-2	L14071368-08	T2.080114.102825	08/01/14 10:28	01
MW 2-3	L14071368-09	T2.080114.103152	08/01/14 10:31	01
35BWW10	L14071368-10	T2.080114.103522	08/01/14 10:35	01
MW 3-1	L14071368-12	T2.080114.103855	08/01/14 10:38	01
FIELD BLANK 17JUL2014	L14071368-13	T2.080114.104228	08/01/14 10:42	01
MW 3-2	L14071368-14	T2.080114.104601	08/01/14 10:46	01
MW 3-3	L14071368-16	T2.080114.110315	08/01/14 11:03	01
35BWW04	L14071368-17	T2.080114.110645	08/01/14 11:06	01
LHS MW-58	L14071368-19	T2.080114.111018	08/01/14 11:10	01
LHS MW-58 D	L14071368-20	T2.080114.111348	08/01/14 11:13	01
35BWW03	L14071368-21	T2.080114.111718	08/01/14 11:17	01
MW 4-1	L14071368-22	T2.080114.112050	08/01/14 11:20	01
MW 4-1 MS	L14071368-23	T2.080114.112420	08/01/14 11:24	01
MW 4-1 MSD	L14071368-24	T2.080114.112734	08/01/14 11:27	01
MW 4-2	L14071368-25	T2.080114.113049	08/01/14 11:30	01
MW 4-3	L14071368-26	T2.080114.113422	08/01/14 11:34	01
35BWW17	L14071368-27	T2.080114.114446	08/01/14 11:44	01
35BWW09	L14071368-28	T2.080114.114815	08/01/14 11:48	01
35BWW08	L14071368-30	T2.080114.115145	08/01/14 11:51	01
FIELD BLANK 22JUL2014	L14071368-31	T2.080114.115516	08/01/14 11:55	01
35BWW05	L14071368-32	T2.080114.115850	08/01/14 11:58	01

Report Name: BLANK_SUMMARY
PDF File ID: 3681914
Report generated 08/04/2014 10:25

METHOD BLANK SUMMARY

Login Number: L14071368
Blank File ID: T2.080114.163004
Prep Date: 07/31/14 09:40
Analyzed Date: 08/01/14 16:30
Analyst: QX

Work Group: WG486616
Blank Sample ID: WG486494-02
Instrument ID: ICP-THERMO2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG486494-03	T2.080114.163338	08/01/14 16:33	01
35BWW05 D	L14071368-33	T2.080114.163653	08/01/14 16:36	01
35BWW06	L14071368-34	T2.080114.164022	08/01/14 16:40	01

Report Name: BLANK_SUMMARY
PDF File ID: 3681914
Report generated 08/04/2014 10:25

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14071368 Prep Date: 07/30/14 07:30 Sample ID: WG486260-02
Instrument ID: PE-ICP2 Run Date: 07/30/14 11:29 Prep Method: 3015
File ID: P2.073014.112919 Analyst: JYH Method: 6010B
Workgroup (AAB#): WG486326 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-30-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3685485
30-JUL-2014 14:31

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14071368 Prep Date:07/28/14 08:17 Sample ID:WG485858-02
Instrument ID:ICP-THERMO2 Run Date:07/28/14 19:00 Prep Method:3015
File ID:T2.072814.190057 Analyst:KHR Method:6010B
Workgroup (AAB#):WG485928 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-TH-28-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3681915
04-AUG-2014 10:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14071368 Prep Date: 07/29/14 08:45 Sample ID: WG486073-02
Instrument ID: ICP-THERMO2 Run Date: 07/30/14 11:19 Prep Method: 3015
File ID: T2.073014.111959 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG486151 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-30-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3681915
04-AUG-2014 10:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14071368 Prep Date: 07/30/14 12:46 Sample ID: WG486376-02
Instrument ID: ICP-THERMO2 Run Date: 08/01/14 10:21 Prep Method: 3015
File ID: T2.080114.102136 Analyst: QX Method: 6010B
Workgroup (AAB#): WG486423 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-01-AUG-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3681915
04-AUG-2014 10:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14071368 Prep Date: 07/31/14 09:40 Sample ID: WG486494-02
Instrument ID: ICP-THERMO2 Run Date: 08/01/14 16:30 Prep Method: 3015
File ID: T2.080114.163004 Analyst: QX Method: 6010B
Workgroup (AAB#): WG486616 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-01-AUG-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3681915
04-AUG-2014 10:13

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 07/30/2014 Sample ID: WG486260-03
Instrument ID: PE-ICP2 Run Time: 11:32 Prep Method: 3015
File ID: P2.073014.113241 Analyst: JYH Method: 6010B
Workgroup (AAB#): WG486326 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65532 Cal ID: PE-ICP-30-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.40	102	85 - 115	
Calcium, Total	6.25	6.33	101	85 - 115	
Iron, Total	2.50	2.63	105	85 - 115	
Magnesium, Total	6.25	6.50	104	85 - 115	
Potassium, Total	31.3	28.8	92.1	85 - 115	
Sodium, Total	31.3	28.8	92.2	85 - 115	
Strontium, Total	0.625	0.664	106	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3685486
Report generated: 07/30/2014 14:31

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 07/28/2014 Sample ID: WG485858-03
Instrument ID: ICP-THERMO2 Run Time: 19:04 Prep Method: 3015
File ID: T2.072814.190428 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG485928 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65532 Cal ID: ICP-TH-28-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.25	99.9	85 - 115	
Calcium, Total	6.25	6.44	103	85 - 115	
Iron, Total	2.50	2.63	105	85 - 115	
Magnesium, Total	6.25	6.17	98.7	85 - 115	
Potassium, Total	31.3	31.1	99.6	85 - 115	
Sodium, Total	31.3	32.1	103	85 - 115	
Strontium, Total	0.625	0.654	105	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3681916
Report generated: 08/04/2014 10:13

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 07/30/2014 Sample ID: WG486073-03
Instrument ID: ICP-THERMO2 Run Time: 11:23 Prep Method: 3015
File ID: T2.073014.112332 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG486151 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65532 Cal ID: ICP-TH-30-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.38	102	85 - 115	
Calcium, Total	6.25	6.45	103	85 - 115	
Iron, Total	2.50	2.57	103	85 - 115	
Magnesium, Total	6.25	6.37	102	85 - 115	
Potassium, Total	31.3	31.7	101	85 - 115	
Sodium, Total	31.3	31.8	102	85 - 115	
Strontium, Total	0.625	0.649	104	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3681916
Report generated: 08/04/2014 10:13

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 08/01/2014 Sample ID: WG486376-03
Instrument ID: ICP-THERMO2 Run Time: 10:25 Prep Method: 3015
File ID: T2.080114.102510 Analyst: QX Method: 6010B
Workgroup (AAB#): WG486423 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65532 Cal ID: ICP-TH-01-AUG-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.41	103	85 - 115	
Calcium, Total	6.25	6.43	103	85 - 115	
Iron, Total	2.50	2.55	102	85 - 115	
Magnesium, Total	6.25	6.44	103	85 - 115	
Potassium, Total	31.3	30.9	99.0	85 - 115	
Sodium, Total	31.3	31.1	99.7	85 - 115	
Strontium, Total	0.625	0.638	102	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3681916
Report generated: 08/04/2014 10:13

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 08/01/2014 Sample ID: WG486494-03
Instrument ID: ICP-THERMO2 Run Time: 16:33 Prep Method: 3015
File ID: T2.080114.163338 Analyst: QX Method: 6010B
Workgroup (AAB#): WG486616 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65532 Cal ID: ICP-TH-01-AUG-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.54	105	85 - 115	
Calcium, Total	6.25	6.60	106	85 - 115	
Iron, Total	2.50	2.78	111	85 - 115	
Magnesium, Total	6.25	6.56	105	85 - 115	
Potassium, Total	31.3	32.3	103	85 - 115	
Sodium, Total	31.3	32.7	105	85 - 115	
Strontium, Total	0.625	0.666	107	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3681916
Report generated: 08/04/2014 10:13

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14071368 Cal ID: ICP-THERMO2- 28-JUL-14 Worknum:WG485928

Instrument ID:ICP-THERMO2 Contract #: Prep Method:3015

Parent ID:L14071368-05 File ID:T2.072814.194141 Dil:1 Method:6010B

Sample ID:L14071368-06 MS File ID:T2.072814.194508 Dil:1 Matrix:Water

Sample ID:L14071368-07 MSD File ID:T2.072814.194819 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.386	6.25	6.85	103	6.25	6.61	99.6	3.52	80 - 120	20	
Calcium, Total	5.80	6.25	13.0	115	6.25	11.5	91.4	12.2	80 - 120	20	
Iron, Total	0.310	2.50	3.02	109	2.50	2.88	103	4.77	80 - 120	20	
Magnesium, Total	2.23	6.25	8.16	94.9	6.25	8.04	93	1.52	80 - 120	20	
Potassium, Total	1.02	31.3	32.5	101	31.3	31.9	98.9	1.92	80 - 120	20	
Sodium, Total	32.3	31.3	61.4	93.3	31.3	61.4	93.3	0.0305	80 - 120	20	
Strontium, Total	0.154	0.625	0.799	103	0.625	0.783	101	1.99	80 - 120	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3681917

Report generated 08/04/2014 12:10

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14071368 Cal ID: ICP-THERMO2- 01-AUG-14 Worknum:WG486423

Instrument ID:ICP-THERMO2 Contract #: Prep Method:3015

Parent ID:L14071368-22 File ID:T2.080114.112050 Dil:1 Method:6010B

Sample ID:L14071368-23 MS File ID:T2.080114.112420 Dil:1 Matrix:Water

Sample ID:L14071368-24 MSD File ID:T2.080114.112734 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.123	6.25	6.52	102	6.25	6.55	103	0.451	80 - 120	20	
Calcium, Total	19.4	6.25	26.7	118	6.25	26.8	119	0.252	80 - 120	20	
Iron, Total	0.223	2.50	2.80	103	2.50	2.80	103	0.246	80 - 120	20	
Magnesium, Total	8.86	6.25	15.6	108	6.25	15.7	109	0.208	80 - 120	20	
Potassium, Total	1.73	31.3	33.7	102	31.3	33.7	102	0.0742	80 - 120	20	
Sodium, Total	92.4	31.3	128	115	31.3	128	115	0.156	80 - 120	20	
Strontium, Total	0.579	0.625	1.26	109	0.625	1.26	109	0.228	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3681917

Report generated 08/04/2014 12:10

Loginnum:L14071368 Cal ID: PE-ICP2- Worknum:WG486326
Instrument ID:PE-ICP2 Contract #: Method:6010B
Parent ID:WG486260-01 File ID:P2.073014.113603 Dil:1 Matrix:WATER
Sample ID:WG486260-04 MS File ID:P2.073014.113928 Dil:1 Units:mg/L
Sample ID:WG486260-05 MSD File ID:P2.073014.114251 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	6.29	101	6.25	6.51	104	3.52	80 - 120	20	
Calcium, Total	9.44	6.25	15.9	103	6.25	16.6	115	4.43	80 - 120	20	
Iron, Total	0.0608	2.50	2.62	102	2.50	2.72	106	3.71	80 - 120	20	
Magnesium, Total	5.18	6.25	11.4	99.0	6.25	12.1	110	5.95	80 - 120	20	
Potassium, Total	0.767	31.3	29.9	93.3	31.3	31.3	97.7	4.40	80 - 120	20	
Sodium, Total	80.1	31.3	108	88.9	31.3	117	119	8.35	80 - 120	20	
Strontium, Total	0.337	0.625	0.985	104	0.625	1.06	115	7.12	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3690819
Report generated 08/01/2014 16:26

Loginnum:L14071368 Cal ID:ICP-THERMO2- Worknum:WG486151
Instrument ID:ICP-THERMO2 Contract #: Method:6010B
Parent ID:WG486073-01 File ID:T2.073014.113720 Dil:1 Matrix:WATER
Sample ID:WG486073-04 MS File ID:T2.073014.114050 Dil:1 Units:mg/L
Sample ID:WG486073-05 MSD File ID:T2.073014.114405 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, TCLP	4.89	50.0	57.0	104	50.0	59.5	109	4.28	80 - 120	20	
Calcium, TCLP	419	50.0	461	84.8	50.0	468	98.1	1.44	80 - 120	20	
Iron, TCLP	4.67	20.0	24.8	100	20.0	26.3	108	5.96	80 - 120	20	
Magnesium, TCLP	48.5	50.0	97.4	97.9	50.0	97.9	98.9	0.493	80 - 120	20	
Potassium, TCLP	8.14	250	268	104	250	265	103	0.980	80 - 120	20	
Sodium, TCLP	1800	250	2010	85.4	250	2030	91.3	0.738	80 - 120	20	
Strontium, TCLP	3.57	5.00	8.70	103	5.00	8.74	103	0.436	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3690342
Report generated 08/04/2014 10:13

Loginnum:L14071368 Cal ID:ICP-THERMO2- Worknum:WG486616
Instrument ID:ICP-THERMO2 Contract #: Method:6010B
Parent ID:WG486494-01 File ID:T2.080114.164722 Dil:1 Matrix:WATER
Sample ID:WG486494-04 MS File ID:T2.080114.165053 Dil:1 Units:mg/L
Sample ID:WG486494-05 MSD File ID:T2.080114.165408 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	6.69	107	6.25	6.57	105	1.78	80 - 120	20	
Calcium, Total	0.908	6.25	7.37	103	6.25	7.28	102	1.27	80 - 120	20	
Iron, Total	0.116	2.50	2.95	113	2.50	2.94	113	0.217	80 - 120	20	
Magnesium, Total	0.704	6.25	7.04	101	6.25	7.09	102	0.791	80 - 120	20	
Potassium, Total	ND	31.3	32.4	104	31.3	32.3	103	0.271	80 - 120	20	
Sodium, Total	1.69	31.3	34.1	104	31.3	33.9	103	0.408	80 - 120	20	
Strontium, Total	ND	0.625	0.665	106	0.625	0.661	106	0.583	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3690342
Report generated 08/04/2014 10:13

METHOD BLANK SUMMARY

Login Number: L14071368
Work Group: WG486021
Blank File ID: NI.072914.132037
Blank Sample ID: WG485969-03
Prep Date: 07/28/14 13:17
Instrument ID: ICP-MS2
Analyzed Date: 07/29/14 13:20
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG485969-04	NI.072914.132345	07/29/14 13:23	01
MW 4-1	L14071368-22	NI.072914.132653	07/29/14 13:26	01
MW 4-1 MS	L14071368-23	NI.072914.133002	07/29/14 13:30	01
MW 4-1 MSD	L14071368-24	NI.072914.133311	07/29/14 13:33	01
35BWW08	L14071368-30	NI.072914.134142	07/29/14 13:41	01
FIELD BLANK 22JUL2014	L14071368-31	NI.072914.134451	07/29/14 13:44	01
35BWW05	L14071368-32	NI.072914.140656	07/29/14 14:06	01
35BWW05 D	L14071368-33	NI.072914.141004	07/29/14 14:10	01
35BWW06	L14071368-34	NI.072914.141312	07/29/14 14:13	01
DUP	WG485969-07	NI.072914.145101	07/29/14 14:51	01
MW 4-1	L14071368-22	NI.073014.160206	07/30/14 16:02	DL01
MW 4-1 MS	L14071368-23	NI.073014.160514	07/30/14 16:05	DL01
MW 4-1 MSD	L14071368-24	NI.073014.160823	07/30/14 16:08	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3684172
Report generated 08/04/2014 13:57

METHOD BLANK SUMMARY

Login Number: L14071368
Work Group: WG486001
Blank File ID: NI.072914.145718
Blank Sample ID: WG485890-02
Prep Date: 07/28/14 09:26
Instrument ID: ICP-MS2
Analyzed Date: 07/29/14 14:57
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG485890-03	NI.072914.151827	07/29/14 15:18	01
MW 1-1	L14071368-01	NI.072914.152136	07/29/14 15:21	01
MW 1-1 D	L14071368-02	NI.072914.152444	07/29/14 15:24	01
MW 1-2	L14071368-03	NI.072914.152753	07/29/14 15:27	01
MW 2-1	L14071368-05	NI.072914.154335	07/29/14 15:43	01
MW 2-1 MS	L14071368-06	NI.072914.155653	07/29/14 15:56	01
MW 2-1 MSD	L14071368-07	NI.072914.160001	07/29/14 16:00	01
MW 2-2	L14071368-08	NI.072914.160310	07/29/14 16:03	01
MW 2-3	L14071368-09	NI.072914.160618	07/29/14 16:06	01
35BWW10	L14071368-10	NI.072914.160926	07/29/14 16:09	01
MW 3-1	L14071368-12	NI.072914.161235	07/29/14 16:12	01
FIELD BLANK 17JUL2014	L14071368-13	NI.072914.161543	07/29/14 16:15	01
MW 3-2	L14071368-14	NI.072914.161852	07/29/14 16:18	01
MW 3-3	L14071368-16	NI.072914.162200	07/29/14 16:22	01
35BWW04	L14071368-17	NI.072914.162508	07/29/14 16:25	01
LHS MW-58	L14071368-19	NI.072914.163437	07/29/14 16:34	01
LHS MW-58 D	L14071368-20	NI.072914.163745	07/29/14 16:37	01
35BWW03	L14071368-21	NI.072914.164053	07/29/14 16:40	01
MW 4-2	L14071368-25	NI.072914.164402	07/29/14 16:44	01
MW 4-3	L14071368-26	NI.072914.164710	07/29/14 16:47	01
35BWW17	L14071368-27	NI.072914.165018	07/29/14 16:50	01
35BWW09	L14071368-28	NI.072914.165327	07/29/14 16:53	01
MW 1-3	L14071368-04	NI.073014.161131	07/30/14 16:11	02
MW 2-2	L14071368-08	NI.073014.161748	07/30/14 16:17	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3684172
Report generated 08/04/2014 13:57

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14071368 Prep Date: 07/28/14 13:17 Sample ID: WG485969-03
Instrument ID: ICP-MS2 Run Date: 07/29/14 13:20 Prep Method: 3015
File ID: NI.072914.132037 Analyst: JYH Method: 6020
Workgroup (AAB#): WG486021 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-29-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000343	1	J
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3684173
31-JUL-2014 09:21

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L14071368 Prep Date:07/28/14 09:26 Sample ID:WG485890-02
Instrument ID:ICP-MS2 Run Date:07/29/14 14:57 Prep Method:3015
File ID:NI.072914.145718 Analyst:JYH Method:6020
Workgroup (AAB#):WG486001 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-MS-29-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3684173
31-JUL-2014 09:21

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 07/29/2014 Sample ID: WG485969-04
Instrument ID: ICP-MS2 Run Time: 13:23 Prep Method: 3015
File ID: NI.072914.132345 Analyst: JYH Method: 6020
Workgroup (AAB#): WG486021 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD63612 Cal ID: ICP-MS-29-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0622	99.5	80 - 120	
Barium, Total	0.0625	0.0618	98.9	80 - 120	
Cadmium, Total	0.0625	0.0615	98.5	80 - 120	
Chromium, Total	0.0625	0.0638	102	80 - 120	
Copper, Total	0.0625	0.0654	105	80 - 120	
Lead, Total	0.0625	0.0609	97.5	80 - 120	
Manganese, Total	0.0625	0.0626	100	80 - 120	
Nickel, Total	0.0625	0.0622	99.5	80 - 120	
Selenium, Total	0.0625	0.0620	99.2	80 - 120	
Thallium, Total	0.0625	0.0606	97.0	80 - 120	
Vanadium, Total	0.0625	0.0617	98.8	80 - 120	
Zinc, Total	0.0625	0.0660	106	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3684174
Report generated: 07/31/2014 09:21

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14071368 Run Date: 07/29/2014 Sample ID: WG485890-03
Instrument ID: ICP-MS2 Run Time: 15:18 Prep Method: 3015
File ID: NI.072914.151827 Analyst: JYH Method: 6020
Workgroup (AAB#): WG486001 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD63612 Cal ID: ICP-MS-29-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0601	96.2	80 - 120	
Barium, Total	0.0625	0.0614	98.3	80 - 120	
Cadmium, Total	0.0625	0.0612	97.9	80 - 120	
Chromium, Total	0.0625	0.0633	101	80 - 120	
Copper, Total	0.0625	0.0653	105	80 - 120	
Lead, Total	0.0625	0.0610	97.6	80 - 120	
Manganese, Total	0.0625	0.0612	97.8	80 - 120	
Nickel, Total	0.0625	0.0634	102	80 - 120	
Selenium, Total	0.0625	0.0627	100	80 - 120	
Thallium, Total	0.0625	0.0605	96.8	80 - 120	
Vanadium, Total	0.0625	0.0609	97.4	80 - 120	
Zinc, Total	0.0625	0.0678	109	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3684174
Report generated: 07/31/2014 09:21

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3687523
Report generated: 07/31/2014 09:06

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14071368 Cal ID: ICP-MS2- 29-JUL-14 Worknum:WG486001

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L14071368-05 File ID:NI.072914.154335 Dil:1 Method:6020

Sample ID:L14071368-06 MS File ID:NI.072914.155653 Dil:1 Matrix:Water

Sample ID:L14071368-07 MSD File ID:NI.072914.160001 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0624	99.9	0.0625	0.0637	102	1.97	75 - 125	20	
Barium, Total	0.0568	0.0625	0.118	97.4	0.0625	0.124	107	5.15	75 - 125	20	
Cadmium, Total	ND	0.0625	0.0627	100	0.0625	0.0643	103	2.43	75 - 125	20	
Chromium, Total	ND	0.0625	0.0616	98.6	0.0625	0.0646	103	4.74	75 - 125	20	
Copper, Total	ND	0.0625	0.0642	103	0.0625	0.0669	107	4.17	75 - 125	20	
Lead, Total	ND	0.0625	0.0641	103	0.0625	0.0657	105	2.42	75 - 125	20	
Manganese, Total	0.0267	0.0625	0.0886	98.9	0.0625	0.0950	109	6.98	75 - 125	20	
Nickel, Total	ND	0.0625	0.0628	101	0.0625	0.0658	105	4.66	75 - 125	20	
Selenium, Total	0.00119	0.0625	0.0634	99.5	0.0625	0.0647	102	2.11	75 - 125	20	
Thallium, Total	ND	0.0625	0.0613	98.1	0.0625	0.0622	99.6	1.47	75 - 125	20	
Vanadium, Total	0.00121	0.0625	0.0612	95.9	0.0625	0.0641	101	4.67	75 - 125	20	
Zinc, Total	ND	0.0625	0.0725	116	0.0625	0.0789	126	8.46	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3684175

Report generated 08/04/2014 14:15

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14071368 Cal ID: ICP-MS2- 29-JUL-14 Worknum:WG486021

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L14071368-22 File ID:NI.072914.132653 Dil:1 Method:6020

Sample ID:L14071368-23 MS File ID:NI.072914.133002 Dil:1 Matrix:Water

Sample ID:L14071368-24 MSD File ID:NI.072914.133311 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0635	102	0.0625	0.0666	107	4.75	75 - 125	20	
Barium, Total	0.0578	0.0625	0.117	95	0.0625	0.124	106	5.65	75 - 125	20	
Cadmium, Total	ND	0.0625	0.0623	99.7	0.0625	0.0650	104	4.17	75 - 125	20	
Chromium, Total	ND	0.0625	0.0621	99.3	0.0625	0.0640	102	3.11	75 - 125	20	
Copper, Total	0.00133	0.0625	0.0646	101	0.0625	0.0645	101	0.0910	75 - 125	20	
Lead, Total	ND	0.0625	0.0633	101	0.0625	0.0665	106	4.94	75 - 125	20	
Nickel, Total	ND	0.0625	0.0624	99.8	0.0625	0.0657	105	5.14	75 - 125	20	
Selenium, Total	0.000716	0.0625	0.0637	101	0.0625	0.0666	105	4.42	75 - 125	20	
Thallium, Total	ND	0.0625	0.0615	98.4	0.0625	0.0645	103	4.66	75 - 125	20	
Vanadium, Total	0.00134	0.0625	0.0626	98	0.0625	0.0650	102	3.78	75 - 125	20	
Zinc, Total	ND	0.0625	0.0711	114	0.0625	0.0799	128	11.7	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3684175

Report generated 08/04/2014 14:15

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14071368 Cal ID: ICP-MS2- 30-JUL-14 Worknum:WG486021

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L14071368-22 File ID:NI.073014.160206 Dil:5 Method:6020

Sample ID:L14071368-23 MS File ID:NI.073014.160514 Dil:5 Matrix:Water

Sample ID:L14071368-24 MSD File ID:NI.073014.160823 Dil:5 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Manganese, Total	0.174	0.0625	0.240	105	0.0625	0.247	116	3.03	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3684175

Report generated 08/04/2014 14:15

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
August 14, 2014

001 - BIO-CHEM TESTING WVDEP 220
002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental
004 - MICROBAC PITTSBURGH
005 - ES LABORATORIES
006 - ALCOSAN LABORATORIES
007 - ALS LABORATORIES
008 - BENCHMARK LABORATORIES
010 - MICROBAC CHICAGOLAND
ADC - ANTHONY D. CANTER
ADG - APRIL D. GREENE
ALS - ADRIANE L. STEED
AWE - ANDREW W. ESSIG
AZH - AFTER HOURS
BJO - BRIAN J. OGDEN
BKT - BRENDAN TORRENCE
BLG - BRENDA L. GREENWALT
BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES
CJR - COURTNEY J. REXROAD
CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS
CSH - CHRIS S. HILL
DAK - DEAN A. KETELSEN
DCM - DAVID C. MERCKLE
DEV - DAVID E. VANDENBERG
DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE
DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON
ENY - EMILY N. YOAK
EPT - ETHAN P. TIDD
ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN
JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON
JDS - JARED D. SMITH
JJS - JOHN J. STE MARIE
JLL - JOHN L. LENT
JMW - JEANA M. WHITE
JTP - JOSHUA T. PEMBERTON
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KAJ - KELLIE A. JOHNSON
KDW - KATHRYN D. WELCH
KEB - KATIE E. BARNES
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
KRB - KAELY R. BECKER
KRP - KATHY R. PARSONS
LEC - LAURA E. CARPENTER
LKN - LINDA K. NEDEFF
LLS - LARRY L. STEPHENS
LSB - LESLIE S. BUCINA
MBK - MORGAN B. KNOWLTON
MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING
MLB - MEGAN L. BACHE
MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE
PSW - PEGGY S. WEBB
QX - QIN XU
RAH - ROY A. HALSTEAD
REK - BOB E. KYER
RLB - BOB BUCHANAN
RM - RAYMOND MALEKE
RNP - RICK N. PETTY
SAV - SARAH A. VANDENBERG
SDC - SHALYN D. CONLEY
SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF
TB - TODD BOYLE
TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
WJB - WILL J. BEASLEY
WRR - WESLEY R. RICHARDS
WTD - WADE T. DELONG
XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
August 14, 2014

Qualkey: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
CT1	The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated value; the analyte concentration was less than the RL/LOQ.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, B	Not detected at or above the reporting limit (RL). Analyte present in method blank.
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, H1	Not detected; Sample analysis performed past holding time.
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
TNTC, B	Too numerous to count. Analyte present in method blank.
U	Analyte was not detected. The concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 43930

158 Starlite Drive
Marietta, OH 45750

MICROBAC®

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Toll Free: 800-373-4071

Company Name: U.S. ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN

Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD

Location: LHAAP

Project ID: 3083.001 / B66490

Sampler (print): GENE L. FABIAN

Signature: Gene L. Fabian

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL METALS	TOTAL # (LAB USE)
MW 1-1		X	15 JUL 2014	1045	GW	4	5	3	1	
MW 1-1 D		X	15 JUL 2014	1100	GW	4	5	3	1	
MW 1-2		X	15 JUL 2014	1430	GW	4	5	3	1	
MW 1-3		X	15 JUL 2014	1600	GW	4	5	3	1	
MW 2-1		X	16 JUL 2014	0935	GW	4	5	3	1	
MW 2-1 MS		X	16 JUL 2014	0945	GW	4	5	3	1	
MW 2-1 MSD		X	16 JUL 2014	0955	GW	4	5	3	1	
MW 2-2		X	16 JUL 2014	1115	GW	4	5	3	1	
MW 2-3		X	16 JUL 2014	1300	GW	4	5	3	1	
35BWW10		X	16 JUL 2014	1553	GW	4	5	3	1	
TRIP BLANK 16JUL2014		X	16 JUL 2014	—	TRIP BLANK	2	5	2	0	
MW 3-1		X	17 JUL 2014	1225	GW	4	5	3	1	
FIELD BLANK 17JUL2014		X	17 JUL 2014	0840	DI WATER	4	5	3	1	
MW 3-2		X	17 JUL 2014	1540	GW	4	5	3	1	
TRIP BLANK 17JUL2014		X	17 JUL 2014	—	TRIP BLANK	2	5	2	0	
MW 3-3		X	18 JUL 2014	0915	GW	4	5	3	1	
35BWW04		X	18 JUL 2014	0930	GW	4	5	3	1	
TRIP BLANK 18JUL2014		X	18 JUL 2014	—	TRIP BLANK	2	5	2	0	
LHS MW-58		X	18 JUL 2014	1200	GW	4	5	3	1	
LHS MW-58D		X	18 JUL 2014	1215	GW	4	5	3	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)
Gene L. Fabian	23 JUL 2014	1300		
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date

Microbac OVD
Received: 07/24/2014 10:18
By: COURTNEY REXROAD
221000057365
Courtney Rexroad

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00838901

COC No. A 43931

158 Starlite Drive
Marietta, OH 45750

MICROBAC®

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Toll Free: 800-373-4071

Company Name: U.S. ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 3083.001/B66490

Sampler (print): GENE L. FABIAN | Signature: Gene L Fabian

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCS	TOTAL METALS	TOTAL # (LAB USE)
35BWW03		X	18JUL2014	1335	GW	4	S	3	1	
MW 4-1		X	21JUL2014	0915	GW	4	S	3	1	
MW 4-1MS		X	21JUL2014	0930	GW	4	S	3	1	
MW 4-1MSD		X	21JUL2014	0940	GW	4	S	3	1	
MW 4-2		X	21JUL2014	1110	GW	4	S	3	1	
MW 4-3		X	21JUL2014	1405	GW	4	S	3	1	
35BWW17		X	21JUL2014	1525	GW	4	S	3	1	
35BWW09		X	22JUL2014	0830	GW	4	S	3	1	
TRIP BLANK 22JUL2014		X	22JUL2014	—	TRIP BLANK	2	S	2	0	
35BWW08		X	22JUL2014	0955	GW	4	S	3	1	
FIELD BLANK 22JUL2014		X	22JUL2014	0930	DI WATER	4	S	3	1	
35BWW05		X	22JUL2014	1140	GW	4	S	3	1	
35BWW05D		X	22JUL2014	1150	GW	4	S	3	1	
35BWW06		X	22JUL2014	1330	GW	4	S	3	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)
Gene L Fabian	23 JUL 2014	1300		
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date

Microbac OVD
Received: 07/24/2014 10:18
By: COURTNEY REXROAD 221000057365
Courtney Rexroad

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

00838902

NELAP Addendum - May 22, 2014

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)
Acetate (HPLC-UV)
Formate (HPLC-UV)
Acetaldehyde (HPLC-UV)
Propionaldehyde (HPLC-UV)
Fluoroborate (ISE)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam

Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Ti 334.940†	502057.8	0.501 mg/L	0.0023	0.501 mg/L	0.0023	0.46%
Tl 190.801†	968.0	0.251 mg/L	0.0030	0.251 mg/L	0.0030	1.18%
V 290.880†	125652.6	0.511 mg/L	0.0056	0.511 mg/L	0.0056	1.09%
Zn 206.200†	27462.3	0.482 mg/L	0.0090	0.482 mg/L	0.0090	1.87%
K 766.490†	82084.3	27.2 mg/L	0.25	27.2 mg/L	0.25	0.92%
Na 589.592†	1345003.9	68.2 mg/L	0.95	68.2 mg/L	0.95	1.39%
Sr 407.771†	3336936.7	1.29 mg/L	0.002	1.29 mg/L	0.002	0.19%
Li 670.784†	84586.2	0.563 mg/L	0.0035	0.563 mg/L	0.0035	0.62%

Sequence No.: 14 **Autosampler Location: 27**
Sample ID: L1207064103 **Date Collected: 7/26/2012 3:12:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064103

Analyte	Back Pressure	Flow
All	157.0 kPa	0.50 L/min

Mean Data: L1207064103

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2292122.1						29679.71	1.29%
YRADIAL	296490.6						2389.02	0.81%
Ga 417.206	1439522.3						32392.66	2.25%
GaRADIAL	86711.5						205.70	0.24%
Ag 328.068†	575.0	0.00301	mg/L	0.000298	0.00301	mg/L	0.000298	9.92%
Al 396.153†	2.9	-0.00114	mg/L	0.004490	-0.00114	mg/L	0.004490	395.18%
As 188.979†	5.0	0.00050	mg/L	0.000694	0.00050	mg/L	0.000694	139.20%
Ba 233.527†	30241.7	0.181	mg/L	0.0038	0.181	mg/L	0.0038	2.09%
Be 234.861†	888.2	0.00038	mg/L	0.000109	0.00038	mg/L	0.000109	28.52%
B 249.677†	22494.5	0.207	mg/L	0.0071	0.207	mg/L	0.0071	3.43%
Ca 227.546†	52018.4	117	mg/L	3.6	117	mg/L	3.6	3.12%
Cd 228.802†	10.1	0.00019	mg/L	0.000199	0.00019	mg/L	0.000199	107.40%
Co 228.616†	42.5	0.00069	mg/L	0.000396	0.00069	mg/L	0.000396	57.64%
Cr 267.716†	126.8	0.00042	mg/L	0.000164	0.00042	mg/L	0.000164	38.77%
Cu 327.393†	3945.6	0.0160	mg/L	0.00029	0.0160	mg/L	0.00029	1.83%
Fe 239.562†	31595.9	2.16	mg/L	0.008	2.16	mg/L	0.008	0.37%
Mg 279.077†	52649.7	15.8	mg/L	0.02	15.8	mg/L	0.02	0.15%
Mn 257.610†	606884.6	0.751	mg/L	0.0037	0.751	mg/L	0.0037	0.49%
Mo 202.031†	138.8	0.00314	mg/L	0.000240	0.00314	mg/L	0.000240	7.64%
Ni 231.604†	19249.0	0.277	mg/L	0.0040	0.277	mg/L	0.0040	1.44%
Pb 220.353†	66.1	0.00478	mg/L	0.001112	0.00478	mg/L	0.001112	23.27%
Sb 206.836†	-11.1	-0.00125	mg/L	0.000530	-0.00125	mg/L	0.000530	42.29%
Se 196.026†	-3.4	0.00028	mg/L	0.003471	0.00028	mg/L	0.003471	>999.9%
Si 251.611†	518676.4	10.3	mg/L	0.22	10.3	mg/L	0.22	2.15%
Sn 189.927†	-317.2	-0.0274	mg/L	0.00054	-0.0274	mg/L	0.00054	1.98%
Ti 334.940†	-21401.3	-0.00312	mg/L	0.001620	-0.00312	mg/L	0.001620	51.90%
Tl 190.801†	-33.7	-0.0119	mg/L	0.00130	-0.0119	mg/L	0.00130	10.87%
V 290.880†	1481.2	0.00471	mg/L	0.002006	0.00471	mg/L	0.002006	42.59%
Zn 206.200†	2328.8	0.0395	mg/L	0.00020	0.0395	mg/L	0.00020	0.50%
K 766.490†	8507.4	2.74	mg/L	0.023	2.74	mg/L	0.023	0.83%
Na 589.592†	618306.6	30.8	mg/L	0.26	30.8	mg/L	0.26	0.83%
Sr 407.771†	1725247.4	0.665	mg/L	0.0100	0.665	mg/L	0.0100	1.50%
Li 670.784†	4218.0	0.0248	mg/L	0.00044	0.0248	mg/L	0.00044	1.77%

Sequence No.: 15 **Autosampler Location: 28**
Sample ID: L1207064104 **Date Collected: 7/26/2012 3:18:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064104

Analyte	Back Pressure	Flow
All	157.0 kPa	0.50 L/min

Approved: July 27, 2012

Microbac

Laboratory Report Number: L14101762

Gene Fabian
Aberdeen Test Center
US Army Aberdeen Center
Aberdeen Proving Ground, MD 21005

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Kathy Albertson – Team Chemist/Data Specialist
(740) 373-4071
Kathy.Albertson@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on November 13 2014

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: Microbac OVD

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

The following discrepancies were noted:

Discrepancy	Resolution
For samples 35BWW03MSD, there are no times listed on the voa labels. CJR For all samples of 35BWW08, the chain of custody has a time of 1340, but the labels say 1345.	Log per the chain per KRA.

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00112058	I	0.0		1015923854210004575000780150200113	X
00112057	I	1.0		1002239554210004575000804245441021	X
00112056	I	1.0		1015923854210004575000780150200102	X
0019705	I	1.0		1015923854210004575000780150200124	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	No
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MW1-1	L14101762-01	10/21/2014 09:45	10/29/2014 11:33
MW1-2	L14101762-02	10/21/2014 11:40	10/29/2014 11:33
35BWW10	L14101762-03	10/21/2014 13:45	10/29/2014 11:33
35BWW10D	L14101762-04	10/21/2014 14:00	10/29/2014 11:33
TRIP BLANK 21OCTOBER14	L14101762-05	10/21/2014 00:01	10/29/2014 11:33
35BWW08	L14101762-06	10/21/2014 15:40	10/29/2014 11:33
TRIP BLANK 22OCTOBER14	L14101762-07	10/22/2014 00:01	10/29/2014 11:33
MW2-1	L14101762-08	10/22/2014 09:00	10/29/2014 11:33
MW2-2	L14101762-09	10/22/2014 11:00	10/29/2014 11:33
MW2-3	L14101762-10	10/22/2014 12:40	10/29/2014 11:33
35BWW03	L14101762-11	10/22/2014 14:00	10/29/2014 11:33
35BWW03MS	L14101762-12	10/22/2014 14:10	10/29/2014 11:33
35BWW03MSD	L14101762-13	10/22/2014 14:20	10/29/2014 11:33
TRIP BLANK 23OCTOBER14	L14101762-14	10/23/2014 00:01	10/29/2014 11:33
FIELD BLANK 23OCTOBER14	L14101762-15	10/23/2014 08:30	10/29/2014 11:33
MW3-1	L14101762-16	10/23/2014 10:15	10/29/2014 11:33
MW3-2	L14101762-17	10/23/2014 12:40	10/29/2014 11:33
MW3-3	L14101762-18	10/23/2014 14:10	10/29/2014 11:33
LHS-MW-58	L14101762-19	10/23/2014 15:15	10/29/2014 11:33
35BWW04	L14101762-20	10/23/2014 09:05	10/29/2014 11:33
35BWW05	L14101762-21	10/24/2014 10:50	10/29/2014 11:33
35BWW06	L14101762-22	10/24/2014 11:50	10/29/2014 11:33
35BWW08	L14101762-23	10/24/2014 13:40	10/29/2014 11:33
35BWW14	L14101762-24	10/27/2014 09:00	10/29/2014 11:33
35BWW14MS	L14101762-25	10/27/2014 09:10	10/29/2014 11:33
35BWW14MSD	L14101762-26	10/27/2014 09:20	10/29/2014 11:33
TRIP BLANK 27OCTOBER14	L14101762-27	10/27/2014 00:01	10/29/2014 11:33
MW4-1	L14101762-28	10/27/2014 10:20	10/29/2014 11:33
MW4-1D	L14101762-29	10/27/2014 10:30	10/29/2014 11:33
MW4-2	L14101762-30	10/27/2014 11:45	10/29/2014 11:33
MW4-3	L14101762-31	10/27/2014 13:20	10/29/2014 11:33
35BWW17	L14101762-32	10/27/2014 15:00	10/29/2014 11:33
35BWW09	L14101762-33	10/28/2014 08:40	10/29/2014 11:33
FIELD BLANK 28OCTOBER14	L14101762-34	10/28/2014 08:30	10/29/2014 11:33
35BWW20	L14101762-35	10/28/2014 10:15	10/29/2014 11:33

Microbac Laboratories
Case Narrative

Login Number: L14101762
Department: Volatiles
Analyst: Anthony Canter

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: The percent difference was out of range for the following analytes: carbon disulfide, dichlorodifluoromethane, vinyl acetate. Please see the applicable QC report for a detailed presentation of the failures.

Continuing Calibration and Tune: Recoveries out of range were observed for the following analytes: Dichlorodifluoromethane, Bromomethane. Please see the applicable QC report for a detailed presentation of the failures.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Recoveries out of range were observed for the following analytes: 1,1,2,2-Tetrachloroethane. Please see the applicable QC report for a detailed presentation of the failures.

Matrix Spikes: Recoveries out of range were observed for the following analytes: 1,1-dichloroethene, 1,2,4-trimethylbenzene, 4-chlorotoluene, hexachlorobutadiene-butylbenzene, n-propylbenene, p-isopropyltoluene, s-

butylbenzene, t-butylbenzene, tetrachloroethene, trichloroethene, 1,1,2,2-tetrachloroethane, 2-chloroethyl vinyl ether. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: Recoveries out of range were observed for the following analytes: Toluene-d8. Please see the applicable QC report for a detailed presentation of the failures.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 91610
Approved By: Michael Albertson

Microbac Laboratories
Case Narrative

Login Number: L14101762
Department: Metals
Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG499787 - All acceptance criteria were met

WG500061 - All acceptance criteria were met.

WG500295 - All acceptance criteria were met.

WG500296 - All acceptance criteria were met.

Matrix Spikes: WG500061 - Sample 11 was chosen by the client for MS/MSD analysis. Samples 12(MS) and 13(MSD) a noncompliant recovery for sodium.

WG500295 - Sample 24 was chosen by the client for MS/MSD analysis. Samples 25(MS) and 26(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 91488
Approved By: Sheri Pfalzgraf

Login Number: L14101762
Department: Metals
Analyst: Ji Hu
Analyst #2: Pierce Morris

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: WG499526 - Due to ICSAB failure for zinc on 05-NOV-2014 at 14:43, all client samples and batch QA/QC were reanalyzed on a later calibration which was compliant for zinc.

Continuing Calibration: WG500181 - Due to continuing calibration verification failure for antimony on 11-NOV-2014 at 15:23, client samples 34, 35 and all batch QA/QC were reanalyzed on a later calibration which was compliant for antimony.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG499526 - Due to post digestion spike and serial dilution failures on 05-NOV-2014, a post digestion spike and serial dilution were reanalzyed on a later calibration for barium and selenium.

WG500177 - Due to analyst error, no spike was added to the post digestion spike sample. The parent sample 06, post spike and serial dilution were reanalzyed on a later calibration for all analytes.

WG500181 - All acceptance criteria were met.

Matrix Spikes: WG499526 - Sample 24 was chosen by the client for MS/MSD analysis. Samples 25(MS) and 26(MSD) yielded a noncompliant recovery for zinc.

WG500177 - Sample 11 was chosen by the client for MS/MSD analysis. Samples 12(MS) and 13(MSD) met all acceptance criteria.

SAMPLES

Samples: WG499526 - Client samples 28 and 29 required dilution analyses in order to obtain results for manganese within the linear range.

Narrative ID: 91406
Approved By: Sheri Pfalzgraf
Sheri L. Pfalzgraf

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-01	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	MW1-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 18:54
Collect Date:	10/21/2014 09:45	**Dilution:**	1	**File ID:**	17M009025
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.05		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	99.2	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	89.4	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MW1-1	**Prep Method:**	3015	**Prep Date:**	11/06/2014 12:34
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/06/2014 12:21
Workgroup #:	WG499787	**Analyst:**	KHR	**Run Date:**	11/06/2014 18:11
Collect Date:	10/21/2014 09:45	**Dilution:**	1	**File ID:**	P2.110614.181103
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	8.79		0.500	0.250
Iron, Total	7439-89-6	0.0730	J	0.100	0.0500
Magnesium, Total	7439-95-4	4.92		0.500	0.250
Potassium, Total	7440-09-7	0.697	J	1.00	0.500
Sodium, Total	7440-23-5	85.5		0.500	0.250
Strontium, Total	7440-24-6	0.317		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW1-1	**Prep Method:**	3015	**Prep Date:**	11/08/2014 08:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/10/2014 14:26
Workgroup #:	WG500177	**Analyst:**	JYH	**Run Date:**	11/10/2014 15:24
Collect Date:	10/21/2014 09:45	**Dilution:**	1	**File ID:**	NI.111014.152446
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0434		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000452	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00161	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00230		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00203		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0316		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00111		0.00100	0.000500
Zinc, Total	7440-66-6	0.0229	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-02	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	MW1-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 19:14
Collect Date:	10/21/2014 11:40	**Dilution:**	1	**File ID:**	17M009026
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.39		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	95.6	80	120	
Toluene-d8	99.2	88	110	
4-Bromofluorobenzene	89.2	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MW1-2	**Prep Method:**	3015	**Prep Date:**	11/06/2014 12:34
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/06/2014 12:21
Workgroup #:	WG499787	**Analyst:**	KHR	**Run Date:**	11/06/2014 18:14
Collect Date:	10/21/2014 11:40	**Dilution:**	1	**File ID:**	P2.110614.181429
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	12.5		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	3.94		0.500	0.250
Potassium, Total	7440-09-7	1.45		1.00	0.500
Sodium, Total	7440-23-5	105		0.500	0.250
Strontium, Total	7440-24-6	1.29		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW1-2	**Prep Method:**	3015	**Prep Date:**	11/08/2014 08:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/10/2014 14:26
Workgroup #:	WG500177	**Analyst:**	JYH	**Run Date:**	11/10/2014 15:27
Collect Date:	10/21/2014 11:40	**Dilution:**	1	**File ID:**	NI.111014.152755
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0854		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000578	J	0.000600	0.000300
Chromium, Total	7440-47-3	0.00195	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00621		0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00607		0.00200	0.00100
Nickel, Total	7440-02-0	0.00219	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0178		0.00100	0.000500
Thallium, Total	7440-28-0	0.000288		0.000200	0.000100
Vanadium, Total	7440-62-2	0.00343		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-03	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	35BWW10	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 19:34
Collect Date:	10/21/2014 13:45	**Dilution:**	1	**File ID:**	17M009027
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	0.732	J	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	42.1		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	100	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	90.5	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-03 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW10 **Prep Method:** 3015 **Prep Date:** 11/06/2014 12:34
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/06/2014 12:21
Workgroup #: WG499787 **Analyst:** KHR **Run Date:** 11/06/2014 18:17
Collect Date: 10/21/2014 13:45 **Dilution:** 1 **File ID:** P2.110614.181755
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.262		0.200	0.100
Calcium, Total	7440-70-2	6.90		0.500	0.250
Iron, Total	7439-89-6	0.581		0.100	0.0500
Magnesium, Total	7439-95-4	4.46		0.500	0.250
Potassium, Total	7440-09-7	0.628	J	1.00	0.500
Sodium, Total	7440-23-5	91.9		0.500	0.250
Strontium, Total	7440-24-6	0.259		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14101762-03 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW10 **Prep Method:** 3015 **Prep Date:** 11/08/2014 08:46
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/10/2014 14:26
Workgroup #: WG500177 **Analyst:** JYH **Run Date:** 11/10/2014 15:31
Collect Date: 10/21/2014 13:45 **Dilution:** 1 **File ID:** NI.111014.153104
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0559		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0167		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00832		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00272		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-04	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	35BWW10D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 19:54
Collect Date:	10/21/2014 14:00	**Dilution:**	1	**File ID:**	17M009028
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	0.709	J	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	41.9		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	98.6	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	92.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-04 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW10D **Prep Method:** 3015 **Prep Date:** 11/06/2014 12:34
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/06/2014 12:21
Workgroup #: WG499787 **Analyst:** KHR **Run Date:** 11/06/2014 18:21
Collect Date: 10/21/2014 14:00 **Dilution:** 1 **File ID:** P2.110614.182118
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.666		0.200	0.100
Calcium, Total	7440-70-2	7.34		0.500	0.250
Iron, Total	7439-89-6	0.482		0.100	0.0500
Magnesium, Total	7439-95-4	4.41		0.500	0.250
Potassium, Total	7440-09-7	0.694	J	1.00	0.500
Sodium, Total	7440-23-5	92.5		0.500	0.250
Strontium, Total	7440-24-6	0.257		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14101762-04 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW10D **Prep Method:** 3015 **Prep Date:** 11/08/2014 08:46
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/10/2014 14:26
Workgroup #: WG500177 **Analyst:** JYH **Run Date:** 11/10/2014 15:34
Collect Date: 10/21/2014 14:00 **Dilution:** 1 **File ID:** NI.111014.153413
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0546		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0151		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00886		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00256		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-05	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	TRIP BLANK 21OCTOBER14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 17:34
Collect Date:	10/21/2014 00:01	**Dilution:**	1	**File ID:**	17M009021
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	102	86	118	
1,2-Dichloroethane-d4	94.2	80	120	
Toluene-d8	99.1	88	110	
4-Bromofluorobenzene	89.3	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-06	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	35BWW08	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 20:14
Collect Date:	10/21/2014 15:40	**Dilution:**	1	**File ID:**	17M009029
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	10.0		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	96.3	80	120	
Toluene-d8	98.5	88	110	
4-Bromofluorobenzene	86.5	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-06	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	35BWW08	**Prep Method:**	3015	**Prep Date:**	11/06/2014 12:34
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/06/2014 12:21
Workgroup #:	WG499787	**Analyst:**	KHR	**Run Date:**	11/06/2014 18:24
Collect Date:	10/21/2014 15:40	**Dilution:**	1	**File ID:**	P2.110614.182444
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.674		0.200	0.100
Calcium, Total	7440-70-2	20.3		0.500	0.250
Iron, Total	7439-89-6	2.41		0.100	0.0500
Magnesium, Total	7439-95-4	11.7		0.500	0.250
Potassium, Total	7440-09-7	1.21		1.00	0.500
Sodium, Total	7440-23-5	117		0.500	0.250
Strontium, Total	7440-24-6	0.708		0.0500	0.0250

Sample #:	L14101762-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW08	**Prep Method:**	3015	**Prep Date:**	11/08/2014 08:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/11/2014 12:45
Workgroup #:	WG500177	**Analyst:**	JYH	**Run Date:**	11/11/2014 14:04
Collect Date:	10/21/2014 15:40	**Dilution:**	1	**File ID:**	NI.111114.140450
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0465		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00240		0.00200	0.00100
Copper, Total	7440-50-8	0.00148	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000798	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0282		0.00200	0.00100
Nickel, Total	7440-02-0	0.00324	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0679		0.00100	0.000500
Thallium, Total	7440-28-0	0.000124	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00282		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-07	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	TRIP BLANK 22OCTOBER14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 17:54
Collect Date:	10/22/2014 00:01	**Dilution:**	1	**File ID:**	17M009022
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	97.8	80	120	
Toluene-d8	103	88	110	
4-Bromofluorobenzene	92.8	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-08	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	MW2-1	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 20:34
Collect Date:	10/22/2014 09:00	**Dilution:**	1	**File ID:**	17M009030
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	2.52		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.19		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	98.4	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	91.4	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-08	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MW2-1	**Prep Method:**	3015	**Prep Date:**	11/07/2014 11:06
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/10/2014 08:37
Workgroup #:	WG500061	**Analyst:**	KHR	**Run Date:**	11/10/2014 09:07
Collect Date:	10/22/2014 09:00	**Dilution:**	1	**File ID:**	P2.111014.090709
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.189	J	0.200	0.100
Calcium, Total	7440-70-2	4.85		0.500	0.250
Iron, Total	7439-89-6	0.283		0.100	0.0500
Magnesium, Total	7439-95-4	1.94		0.500	0.250
Potassium, Total	7440-09-7	0.810	J	1.00	0.500
Sodium, Total	7440-23-5	27.9		0.500	0.250
Strontium, Total	7440-24-6	0.128		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #:	L14101762-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-1	**Prep Method:**	3015	**Prep Date:**	11/08/2014 08:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/10/2014 14:26
Workgroup #:	WG500177	**Analyst:**	JYH	**Run Date:**	11/10/2014 15:56
Collect Date:	10/22/2014 09:00	**Dilution:**	1	**File ID:**	NI.111014.155619
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0569		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000330	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0418		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00188		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00151		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-09	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	MW2-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 20:54
Collect Date:	10/22/2014 11:00	**Dilution:**	1	**File ID:**	17M009031
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	96.5	80	120	
Toluene-d8	98.9	88	110	
4-Bromofluorobenzene	89.8	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-09	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MW2-2	**Prep Method:**	3015	**Prep Date:**	11/07/2014 11:06
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/10/2014 08:37
Workgroup #:	WG500061	**Analyst:**	KHR	**Run Date:**	11/10/2014 09:10
Collect Date:	10/22/2014 11:00	**Dilution:**	1	**File ID:**	P2.111014.091031
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	9.31		0.200	0.100
Calcium, Total	7440-70-2	2.72		0.500	0.250
Iron, Total	7439-89-6	9.80		0.100	0.0500
Magnesium, Total	7439-95-4	2.03		0.500	0.250
Potassium, Total	7440-09-7	1.82		1.00	0.500
Sodium, Total	7440-23-5	27.6		0.500	0.250
Strontium, Total	7440-24-6	0.0761		0.0500	0.0250

Sample #:	L14101762-09	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW2-2	**Prep Method:**	3015	**Prep Date:**	11/08/2014 08:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/10/2014 14:26
Workgroup #:	WG500177	**Analyst:**	JYH	**Run Date:**	11/10/2014 15:59
Collect Date:	10/22/2014 11:00	**Dilution:**	1	**File ID:**	NI.111014.155928
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0859		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00517		0.00200	0.00100
Copper, Total	7440-50-8	0.00322		0.00200	0.00100
Lead, Total	7439-92-1	0.00245		0.00100	0.000500
Manganese, Total	7439-96-5	0.0247		0.00200	0.00100
Nickel, Total	7440-02-0	0.00645		0.00400	0.00200
Selenium, Total	7782-49-2	0.00373		0.00100	0.000500
Thallium, Total	7440-28-0	0.000143	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00791		0.00100	0.000500
Zinc, Total	7440-66-6	0.134		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-10	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	MW2-3	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 21:23
Collect Date:	10/22/2014 12:40	**Dilution:**	1	**File ID:**	17M009032
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	0.431	J	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	109	86	118	
1,2-Dichloroethane-d4	100	80	120	
Toluene-d8	105	88	110	
4-Bromofluorobenzene	93.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-10 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW2-3 **Prep Method:** 3015 **Prep Date:** 11/07/2014 11:06
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/10/2014 08:37
Workgroup #: WG500061 **Analyst:** KHR **Run Date:** 11/10/2014 09:13
Collect Date: 10/22/2014 12:40 **Dilution:** 1 **File ID:** P2.111014.091353
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.32		0.200	0.100
Calcium, Total	7440-70-2	2.18		0.500	0.250
Iron, Total	7439-89-6	2.37		0.100	0.0500
Magnesium, Total	7439-95-4	0.558		0.500	0.250
Potassium, Total	7440-09-7	0.769	J	1.00	0.500
Sodium, Total	7440-23-5	23.1		0.500	0.250
Strontium, Total	7440-24-6	0.197		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14101762-10 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW2-3 **Prep Method:** 3015 **Prep Date:** 11/08/2014 08:46
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/10/2014 14:26
Workgroup #: WG500177 **Analyst:** JYH **Run Date:** 11/10/2014 16:02
Collect Date: 10/22/2014 12:40 **Dilution:** 1 **File ID:** NI.111014.160237
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0396		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00212		0.00200	0.00100
Copper, Total	7440-50-8	0.00794		0.00200	0.00100
Lead, Total	7439-92-1	0.000862	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00966		0.00200	0.00100
Nickel, Total	7440-02-0	0.00225	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00205		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00339		0.00100	0.000500
Zinc, Total	7440-66-6	0.0642		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-11	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	35BWW03	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 21:43
Collect Date:	10/22/2014 14:00	**Dilution:**	1	**File ID:**	17M009033
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	98.9	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	90.5	86	115	

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-11 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW03 **Prep Method:** 3015 **Prep Date:** 11/07/2014 11:06
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/10/2014 08:37
Workgroup #: WG500061 **Analyst:** KHR **Run Date:** 11/10/2014 09:17
Collect Date: 10/22/2014 14:00 **Dilution:** 1 **File ID:** P2.111014.091715
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	9.77		0.500	0.250
Iron, Total	7439-89-6	0.0510	J	0.100	0.0500
Magnesium, Total	7439-95-4	4.13		0.500	0.250
Potassium, Total	7440-09-7	6.09		1.00	0.500
Sodium, Total	7440-23-5	159		0.500	0.250
Strontium, Total	7440-24-6	0.708		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-11 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW03 **Prep Method:** 3015 **Prep Date:** 11/08/2014 08:46
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/10/2014 14:26
Workgroup #: WG500177 **Analyst:** JYH **Run Date:** 11/10/2014 16:05
Collect Date: 10/22/2014 14:00 **Dilution:** 1 **File ID:** NI.111014.160545
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.101		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00373		0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00977		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00222		0.00100	0.000500
Thallium, Total	7440-28-0	0.000127	J	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-12
Client ID: 35BWW03MS
Matrix: Water
Workgroup #: WG498613
Collect Date: 10/22/2014 14:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 10/03/2014 12:52
Run Date: 10/29/2014 16:15
File ID: 17M009017

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	19.9		10.0	2.50
Benzene	71-43-2	20.4		1.00	0.125
Bromobenzene	108-86-1	18.5		1.00	0.125
Bromochloromethane	74-97-5	20.5		1.00	0.200
Bromodichloromethane	75-27-4	20.1		1.00	0.250
Bromoform	75-25-2	21.0		1.00	0.500
Bromomethane	74-83-9	27.3		1.00	0.500
2-Butanone	78-93-3	19.2		10.0	2.50
n-Butylbenzene	104-51-8	18.4		1.00	0.250
sec-Butylbenzene	135-98-8	18.2		1.00	0.250
tert-Butylbenzene	98-06-6	18.3		1.00	0.250
Carbon disulfide	75-15-0	19.0		1.00	0.500
Carbon tetrachloride	56-23-5	21.5		1.00	0.250
Chlorobenzene	108-90-7	20.9		1.00	0.125
Chlorodibromomethane	124-48-1	20.6		1.00	0.250
Chloroethane	75-00-3	17.5		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	21.3		1.00	0.125
Chloromethane	74-87-3	16.5		1.00	0.500
2-Chlorotoluene	95-49-8	18.2		1.00	0.125
4-Chlorotoluene	106-43-4	18.7		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	16.9		5.00	1.00
1,2-Dibromoethane	106-93-4	19.5		1.00	0.250
Dibromomethane	74-95-3	21.1		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.9		1.00	0.125
1,3-Dichlorobenzene	541-73-1	19.5		1.00	0.250
1,4-Dichlorobenzene	106-46-7	18.4		1.00	0.125
Dichlorodifluoromethane	75-71-8	25.8		1.00	0.250
1,1-Dichloroethane	75-34-3	19.8		1.00	0.125
1,2-Dichloroethane	107-06-2	19.6		1.00	0.250
1,1-Dichloroethene	75-35-4	18.5		1.00	0.500

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
cis-1,2-Dichloroethene	156-59-2	20.5		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	20.2		1.00	0.250
1,2-Dichloropropane	78-87-5	19.4		1.00	0.200
1,3-Dichloropropane	142-28-9	18.4		1.00	0.200
2,2-Dichloropropane	594-20-7	21.5		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	21.0		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	19.6		1.00	0.500
1,1-Dichloropropene	563-58-6	20.5		1.00	0.250
Ethylbenzene	100-41-4	20.3		1.00	0.250
2-Hexanone	591-78-6	18.6		10.0	2.50
Hexachlorobutadiene	87-68-3	17.0		1.00	0.250
Isopropylbenzene	98-82-8	21.1		1.00	0.250
p-Isopropyltoluene	99-87-6	18.2		1.00	0.250
4-Methyl-2-pentanone	108-10-1	19.3		10.0	2.50
Methylene chloride	75-09-2	19.6		5.00	0.250
Naphthalene	91-20-3	14.4		1.00	0.200
n-Propylbenzene	103-65-1	18.3		1.00	0.125
Styrene	100-42-5	20.5		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	19.8		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	15.9		1.00	0.200
Tetrachloroethene	127-18-4	21.3		1.00	0.250
Toluene	108-88-3	19.8		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	17.8		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	19.0		1.00	0.200
1,1,1-Trichloroethane	71-55-6	21.3		1.00	0.250
1,1,2-Trichloroethane	79-00-5	19.0		1.00	0.250
Trichloroethene	79-01-6	21.1		1.00	0.250
Trichlorofluoromethane	75-69-4	23.5		1.00	0.250
1,2,3-Trichloropropane	96-18-4	16.6		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	17.9		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	18.1		1.00	0.250
Vinyl acetate	108-05-4	36.2		10.0	2.50
Vinyl chloride	75-01-4	18.8		1.00	0.250
o-Xylene	95-47-6	20.8		1.00	0.250
m-,p-Xylene	179601-23-1	41.9		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	106	86	118	
1,2-Dichloroethane-d4	94.8	80	120	
Toluene-d8	102	88	110	

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

4-Bromofluorobenzene	89.4	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-12 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW03MS **Prep Method:** 3015 **Prep Date:** 11/07/2014 11:05
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/10/2014 08:37
Workgroup #: WG500061 **Analyst:** KHR **Run Date:** 11/10/2014 09:20
Collect Date: 10/22/2014 14:10 **Dilution:** 1 **File ID:** P2.111014.092041
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.29		0.200	0.100
Calcium, Total	7440-70-2	16.7		0.500	0.250
Iron, Total	7439-89-6	2.67		0.100	0.0500
Magnesium, Total	7439-95-4	10.7		0.500	0.250
Potassium, Total	7440-09-7	37.9		1.00	0.500
Sodium, Total	7440-23-5	186		0.500	0.250
Strontium, Total	7440-24-6	1.34		0.0500	0.0250

Sample #: L14101762-12 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW03MS **Prep Method:** 3015 **Prep Date:** 11/08/2014 08:46
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/10/2014 14:26
Workgroup #: WG500177 **Analyst:** JYH **Run Date:** 11/10/2014 16:08
Collect Date: 10/22/2014 14:10 **Dilution:** 1 **File ID:** NI.111014.160854
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0638		0.00100	0.000500
Barium, Total	7440-39-3	0.161		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0625		0.000600	0.000300
Chromium, Total	7440-47-3	0.0641		0.00200	0.00100
Copper, Total	7440-50-8	0.0630		0.00200	0.00100
Lead, Total	7439-92-1	0.0647		0.00100	0.000500
Manganese, Total	7439-96-5	0.0731		0.00200	0.00100
Nickel, Total	7440-02-0	0.0624		0.00400	0.00200
Selenium, Total	7782-49-2	0.0669		0.00100	0.000500
Thallium, Total	7440-28-0	0.0641		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0640		0.00100	0.000500
Zinc, Total	7440-66-6	0.0697		0.0250	0.0125

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-13	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	35BWW03MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 16:35
Collect Date:	10/22/2014 14:20	**Dilution:**	1	**File ID:**	17M009018
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	18.7		10.0	2.50
Benzene	71-43-2	19.0		1.00	0.125
Bromobenzene	108-86-1	17.6		1.00	0.125
Bromochloromethane	74-97-5	19.3		1.00	0.200
Bromodichloromethane	75-27-4	19.2		1.00	0.250
Bromoform	75-25-2	20.6		1.00	0.500
Bromomethane	74-83-9	24.5		1.00	0.500
2-Butanone	78-93-3	18.7		10.0	2.50
n-Butylbenzene	104-51-8	17.2		1.00	0.250
sec-Butylbenzene	135-98-8	17.0		1.00	0.250
tert-Butylbenzene	98-06-6	17.0		1.00	0.250
Carbon disulfide	75-15-0	17.8		1.00	0.500
Carbon tetrachloride	56-23-5	20.2		1.00	0.250
Chlorobenzene	108-90-7	19.6		1.00	0.125
Chlorodibromomethane	124-48-1	19.6		1.00	0.250
Chloroethane	75-00-3	20.9		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.0		1.00	0.125
Chloromethane	74-87-3	15.7		1.00	0.500
2-Chlorotoluene	95-49-8	17.0		1.00	0.125
4-Chlorotoluene	106-43-4	17.5		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	16.7		5.00	1.00
1,2-Dibromoethane	106-93-4	18.7		1.00	0.250
Dibromomethane	74-95-3	20.0		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.0		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.3		1.00	0.250
1,4-Dichlorobenzene	106-46-7	17.2		1.00	0.125
Dichlorodifluoromethane	75-71-8	24.3		1.00	0.250
1,1-Dichloroethane	75-34-3	18.6		1.00	0.125
1,2-Dichloroethane	107-06-2	18.8		1.00	0.250
1,1-Dichloroethene	75-35-4	17.3		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	19.5		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	18.8		1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5	18.4		1.00	0.200
1,3-Dichloropropane	142-28-9	17.5		1.00	0.200
2,2-Dichloropropane	594-20-7	20.0		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	19.9		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	18.8		1.00	0.500
1,1-Dichloropropene	563-58-6	19.0		1.00	0.250
Ethylbenzene	100-41-4	18.9		1.00	0.250
2-Hexanone	591-78-6	17.9		10.0	2.50
Hexachlorobutadiene	87-68-3	15.9		1.00	0.250
Isopropylbenzene	98-82-8	19.7		1.00	0.250
p-Isopropyltoluene	99-87-6	16.9		1.00	0.250
4-Methyl-2-pentanone	108-10-1	18.3		10.0	2.50
Methylene chloride	75-09-2	18.7		5.00	0.250
Naphthalene	91-20-3	13.9		1.00	0.200
n-Propylbenzene	103-65-1	17.1		1.00	0.125
Styrene	100-42-5	19.4		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	18.8		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	15.4		1.00	0.200
Tetrachloroethene	127-18-4	19.9		1.00	0.250
Toluene	108-88-3	18.5		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	17.0		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	18.0		1.00	0.200
1,1,1-Trichloroethane	71-55-6	20.2		1.00	0.250
1,1,2-Trichloroethane	79-00-5	18.1		1.00	0.250
Trichloroethene	79-01-6	20.0		1.00	0.250
Trichlorofluoromethane	75-69-4	22.0		1.00	0.250
1,2,3-Trichloropropane	96-18-4	16.0		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	16.8		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	17.0		1.00	0.250
Vinyl acetate	108-05-4	34.4		10.0	2.50
Vinyl chloride	75-01-4	17.7		1.00	0.250
o-Xylene	95-47-6	19.8		1.00	0.250
m-,p-Xylene	179601-23-1	39.1		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	93.5	80	120	
Toluene-d8	99.9	88	110	
4-Bromofluorobenzene	87.1	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-13	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	35BWW03MSD	**Prep Method:**	3015	**Prep Date:**	11/07/2014 11:05
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/10/2014 08:37
Workgroup #:	WG500061	**Analyst:**	KHR	**Run Date:**	11/10/2014 09:23
Collect Date:	10/22/2014 14:20	**Dilution:**	1	**File ID:**	P2.111014.092309
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.07		0.200	0.100
Calcium, Total	7440-70-2	16.1		0.500	0.250
Iron, Total	7439-89-6	2.54		0.100	0.0500
Magnesium, Total	7439-95-4	10.2		0.500	0.250
Potassium, Total	7440-09-7	37.2		1.00	0.500
Sodium, Total	7440-23-5	183		0.500	0.250
Strontium, Total	7440-24-6	1.30		0.0500	0.0250

Sample #:	L14101762-13	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW03MSD	**Prep Method:**	3015	**Prep Date:**	11/08/2014 08:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/10/2014 14:26
Workgroup #:	WG500177	**Analyst:**	JYH	**Run Date:**	11/10/2014 16:12
Collect Date:	10/22/2014 14:20	**Dilution:**	1	**File ID:**	NI.111014.161203
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0643		0.00100	0.000500
Barium, Total	7440-39-3	0.169		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0626		0.000600	0.000300
Chromium, Total	7440-47-3	0.0651		0.00200	0.00100
Copper, Total	7440-50-8	0.0640		0.00200	0.00100
Lead, Total	7439-92-1	0.0647		0.00100	0.000500
Manganese, Total	7439-96-5	0.0783		0.00200	0.00100
Nickel, Total	7440-02-0	0.0623		0.00400	0.00200
Selenium, Total	7782-49-2	0.0683		0.00100	0.000500
Thallium, Total	7440-28-0	0.0639		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0646		0.00100	0.000500
Zinc, Total	7440-66-6	0.0703		0.0250	0.0125

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-14	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	TRIP BLANK 23OCTOBER14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 18:14
Collect Date:	10/23/2014 00:01	**Dilution:**	1	**File ID:**	17M009023
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	104	86	118	
1,2-Dichloroethane-d4	94.4	80	120	
Toluene-d8	99.5	88	110	
4-Bromofluorobenzene	88.5	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-15	**PrePrep Method:**	N/A	**Instrument:**	HPMS17
Client ID:	FIELD BLANK 23OCTOBER14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 12:52
Workgroup #:	WG498613	**Analyst:**	ADC	**Run Date:**	10/29/2014 18:34
Collect Date:	10/23/2014 08:30	**Dilution:**	1	**File ID:**	17M009024
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.175	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2	0.263	J	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	97.2	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	90.9	86	115	

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-15
Client ID: FIELD BLANK 23OCTOBER14
Matrix: Water
Workgroup #: WG500061
Collect Date: 10/23/2014 08:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/07/2014 11:06
Cal Date: 11/10/2014 08:37
Run Date: 11/10/2014 09:37
File ID: P2.111014.093717

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-15
Client ID: FIELD BLANK 23OCTOBER14
Matrix: Water
Workgroup #: WG500177
Collect Date: 10/23/2014 08:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/08/2014 08:46
Cal Date: 11/10/2014 14:26
Run Date: 11/10/2014 16:15
File ID: NI.111014.161512

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00116	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-16
Client ID: MW3-1
Matrix: Water
Workgroup #: WG498613
Collect Date: 10/23/2014 10:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 10/03/2014 12:52
Run Date: 10/29/2014 22:03
File ID: 17M009034

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	14.0		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.72		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q

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Lab Report #: L14101762
Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

Certificate of Analysis

Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	99.3	80	120	
Toluene-d8	101	88	110	
4-Bromofluorobenzene	93.3	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-16 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW3-1 **Prep Method:** 3015 **Prep Date:** 11/07/2014 11:06
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/10/2014 08:37
Workgroup #: WG500061 **Analyst:** KHR **Run Date:** 11/10/2014 09:40
Collect Date: 10/23/2014 10:15 **Dilution:** 1 **File ID:** P2.111014.094038
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.206		0.200	0.100
Calcium, Total	7440-70-2	21.1		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	1.74		0.500	0.250
Potassium, Total	7440-09-7	7.01		1.00	0.500
Sodium, Total	7440-23-5	76.5		0.500	0.250
Strontium, Total	7440-24-6	2.09		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-16 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW3-1 **Prep Method:** 3015 **Prep Date:** 11/08/2014 08:46
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/10/2014 14:26
Workgroup #: WG500177 **Analyst:** JYH **Run Date:** 11/10/2014 16:18
Collect Date: 10/23/2014 10:15 **Dilution:** 1 **File ID:** NI.111014.161821
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0888		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00120	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00256		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Vanadium, Total	7440-62-2	0.00960		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-17
Client ID: MW3-2
Matrix: Water
Workgroup #: WG498613
Collect Date: 10/23/2014 12:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 10/03/2014 12:52
Run Date: 10/29/2014 22:23
File ID: 17M009035

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.445	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.928	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.309	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	71.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	4.79		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	105	86	118	
1,2-Dichloroethane-d4	97.1	80	120	
Toluene-d8	99.5	88	110	
4-Bromofluorobenzene	89.9	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-17 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW3-2 **Prep Method:** 3015 **Prep Date:** 11/10/2014 07:51
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/11/2014 14:05
Workgroup #: WG500296 **Analyst:** KHR **Run Date:** 11/11/2014 17:04
Collect Date: 10/23/2014 12:40 **Dilution:** 1 **File ID:** P2.111114.170456
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	27.4		0.500	0.250
Iron, Total	7439-89-6	0.0760	J	0.100	0.0500
Magnesium, Total	7439-95-4	4.58		0.500	0.250
Potassium, Total	7440-09-7	1.62		1.00	0.500
Sodium, Total	7440-23-5	30.9		0.500	0.250
Strontium, Total	7440-24-6	1.90		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-17 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW3-2 **Prep Method:** 3015 **Prep Date:** 11/08/2014 08:46
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/10/2014 14:26
Workgroup #: WG500177 **Analyst:** JYH **Run Date:** 11/10/2014 16:21
Collect Date: 10/23/2014 12:40 **Dilution:** 1 **File ID:** NI.111014.162130
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.176		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00135	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0228		0.00200	0.00100

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00298		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00256		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-18
Client ID: MW3-3
Matrix: Water
Workgroup #: WG498613
Collect Date: 10/23/2014 14:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 10/03/2014 12:52
Run Date: 10/29/2014 22:43
File ID: 17M009036

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	11.9		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.46		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	100	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	90.3	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-18 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW3-3 **Prep Method:** 3015 **Prep Date:** 11/10/2014 07:51
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/11/2014 14:05
Workgroup #: WG500296 **Analyst:** KHR **Run Date:** 11/11/2014 17:08
Collect Date: 10/23/2014 14:10 **Dilution:** 1 **File ID:** P2.111114.170822
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	2.67		0.200	0.100
Calcium, Total	7440-70-2	7.07		0.500	0.250
Iron, Total	7439-89-6	4.11		0.100	0.0500
Magnesium, Total	7439-95-4	1.52		0.500	0.250
Potassium, Total	7440-09-7	1.02		1.00	0.500
Sodium, Total	7440-23-5	55.0		0.500	0.250
Strontium, Total	7440-24-6	0.455		0.0500	0.0250

Sample #: L14101762-18 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW3-3 **Prep Method:** 3015 **Prep Date:** 11/08/2014 08:46
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/10/2014 14:26
Workgroup #: WG500177 **Analyst:** JYH **Run Date:** 11/10/2014 16:24
Collect Date: 10/23/2014 14:10 **Dilution:** 1 **File ID:** NI.111014.162439
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0688		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00954		0.00200	0.00100
Copper, Total	7440-50-8	0.00346		0.00200	0.00100
Lead, Total	7439-92-1	0.00205		0.00100	0.000500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.0197		0.00200	0.00100
Nickel, Total	7440-02-0	0.00536		0.00400	0.00200
Selenium, Total	7782-49-2	0.0167		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.0109		0.00100	0.000500
Zinc, Total	7440-66-6	0.0181	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-19
Client ID: LHS-MW-58
Matrix: Water
Workgroup #: WG498613
Collect Date: 10/23/2014 15:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 10/03/2014 12:52
Run Date: 10/29/2014 23:03
File ID: 17M009037

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	18.6		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	2.93		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	103	86	118	
1,2-Dichloroethane-d4	95.6	80	120	
Toluene-d8	98.1	88	110	
4-Bromofluorobenzene	87.6	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-19
Client ID: LHS-MW-58
Matrix: Water
Workgroup #: WG500296
Collect Date: 10/23/2014 15:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:51
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 17:11
File ID: P2.111114.171145

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.236		0.200	0.100
Calcium, Total	7440-70-2	11.3		0.500	0.250
Iron, Total	7439-89-6	0.263		0.100	0.0500
Magnesium, Total	7439-95-4	3.84		0.500	0.250
Potassium, Total	7440-09-7	1.61		1.00	0.500
Sodium, Total	7440-23-5	60.0		0.500	0.250
Strontium, Total	7440-24-6	0.235		0.0500	0.0250

Sample #: L14101762-19
Client ID: LHS-MW-58
Matrix: Water
Workgroup #: WG500177
Collect Date: 10/23/2014 15:15
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/08/2014 08:46
Cal Date: 11/10/2014 14:26
Run Date: 11/10/2014 16:34
File ID: NI.111014.163409

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.109		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00579		0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100

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Analyte	CAS #	Result	Qual	RL	MDL
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00722		0.00200	0.00100
Nickel, Total	7440-02-0	0.00270	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0135		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00165		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-20
Client ID: 35BWW04
Matrix: Water
Workgroup #: WG498613
Collect Date: 10/23/2014 09:05
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: ADC
Dilution: 1
Units: ug/L

Instrument: HPMS17
Prep Date: N/A
Cal Date: 10/03/2014 12:52
Run Date: 10/29/2014 23:23
File ID: 17M009038

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.393	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.762	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.316	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	45.0		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.26		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	107	86	118	
1,2-Dichloroethane-d4	100	80	120	
Toluene-d8	102	88	110	
4-Bromofluorobenzene	91.4	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-20
Client ID: 35BWW04
Matrix: Water
Workgroup #: WG500296
Collect Date: 10/23/2014 09:05
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:51
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 17:15
File ID: P2.111114.171508

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.693		0.200	0.100
Calcium, Total	7440-70-2	5.70		0.500	0.250
Iron, Total	7439-89-6	1.73		0.100	0.0500
Magnesium, Total	7439-95-4	3.15		0.500	0.250
Potassium, Total	7440-09-7	0.584	J	1.00	0.500
Sodium, Total	7440-23-5	58.6		0.500	0.250
Strontium, Total	7440-24-6	0.191		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14101762-20
Client ID: 35BWW04
Matrix: Water
Workgroup #: WG500177
Collect Date: 10/23/2014 09:05
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/08/2014 08:46
Cal Date: 11/10/2014 14:26
Run Date: 11/10/2014 16:37
File ID: NI.111014.163718

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0574		0.00300	0.00150

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Analyte	CAS #	Result	Qual	RL	MDL
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00149	J	0.00200	0.00100
Copper, Total	7440-50-8	0.00111	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000605	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00588		0.00200	0.00100
Nickel, Total	7440-02-0	0.00231	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00232		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00339		0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-21
Client ID: 35BWW05
Matrix: Water
Workgroup #: WG498711
Collect Date: 10/24/2014 10:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/03/2014 19:42
Run Date: 10/30/2014 21:54
File ID: 8M400980

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.320	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	2.14		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	15.9		1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.0	86	118	
1,2-Dichloroethane-d4	93.5	80	120	
Toluene-d8	89.5	88	110	
4-Bromofluorobenzene	101	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-21
Client ID: 35BWW05
Matrix: Water
Workgroup #: WG500296
Collect Date: 10/24/2014 10:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:51
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 17:18
File ID: P2.111114.171830

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.117	J	0.200	0.100
Calcium, Total	7440-70-2	13.7		0.500	0.250
Iron, Total	7439-89-6	1.28		0.100	0.0500
Magnesium, Total	7439-95-4	7.70		0.500	0.250
Potassium, Total	7440-09-7	0.719	J	1.00	0.500
Sodium, Total	7440-23-5	64.1		0.500	0.250
Strontium, Total	7440-24-6	0.500		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14101762-21
Client ID: 35BWW05
Matrix: Water
Workgroup #: WG500177
Collect Date: 10/24/2014 10:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/08/2014 08:46
Cal Date: 11/10/2014 14:26
Run Date: 11/10/2014 16:40
File ID: NI.111014.164027

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0493		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0448		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00159		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000791	J	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-22
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG498711
Collect Date: 10/24/2014 11:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/03/2014 19:42
Run Date: 10/30/2014 19:59
File ID: 8M400976

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	99.8	86	118	
1,2-Dichloroethane-d4	94.3	80	120	
Toluene-d8	89.3	88	110	
4-Bromofluorobenzene	104	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-22
Client ID: 35BWW06
Matrix: Water
Workgroup #: WG500296
Collect Date: 10/24/2014 11:50
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:51
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 17:27
File ID: P2.111114.172739

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	66.6		0.500	0.250
Iron, Total	7439-89-6	3.53		0.100	0.0500
Magnesium, Total	7439-95-4	19.2		0.500	0.250
Potassium, Total	7440-09-7	2.14		1.00	0.500
Sodium, Total	7440-23-5	149		0.500	0.250
Strontium, Total	7440-24-6	1.94		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-22	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW06	**Prep Method:**	3015	**Prep Date:**	11/08/2014 08:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/10/2014 14:26
Workgroup #:	WG500177	**Analyst:**	JYH	**Run Date:**	11/10/2014 16:43
Collect Date:	10/24/2014 11:50	**Dilution:**	1	**File ID:**	NI.111014.164336
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0633		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.191		0.00200	0.00100
Nickel, Total	7440-02-0	0.00316	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00633		0.00100	0.000500
Thallium, Total	7440-28-0	0.000105	J	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-23	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW08	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 22:51
Collect Date:	10/24/2014 13:40	**Dilution:**	1	**File ID:**	8M400982
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	18.4		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.0	86	118	
1,2-Dichloroethane-d4	93.9	80	120	
Toluene-d8	89.3	88	110	
4-Bromofluorobenzene	104	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-23
Client ID: 35BWW08
Matrix: Water
Workgroup #: WG500296
Collect Date: 10/24/2014 13:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:51
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 17:30
File ID: P2.111114.173005

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	19.1		0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4	11.0		0.500	0.250
Potassium, Total	7440-09-7	1.17		1.00	0.500
Sodium, Total	7440-23-5	114		0.500	0.250
Strontium, Total	7440-24-6	0.673		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW08	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:15
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/06/2014 09:06
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/06/2014 16:05
Collect Date:	10/24/2014 13:40	**Dilution:**	1	**File ID:**	NI.110614.160500
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-23	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW08	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:15
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/05/2014 14:27
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/05/2014 16:07
Collect Date:	10/24/2014 13:40	**Dilution:**	1	**File ID:**	NI.110514.160710
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0420		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00116	J	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.0673		0.00100	0.000500
Thallium, Total	7440-28-0	0.000108	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000845	J	0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-24	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/31/2014 00:19
Collect Date:	10/27/2014 09:00	**Dilution:**	1	**File ID:**	8M400985
Sample Tag:	01	**Units:**	ug/L		

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2	0.156	J	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7	0.336	J	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.171	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	4.17		1.00	0.125
1,2-Dichloroethane	107-06-2	0.357	J	1.00	0.250
1,1-Dichloroethene	75-35-4	40.1		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	10.4		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	0.339	J	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	26.8		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	78.3		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4	3.06		1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.6	86	118	
1,2-Dichloroethane-d4	93.4	80	120	
Toluene-d8	88.3	88	110	
4-Bromofluorobenzene	98.9	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-24	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	35BWW14	**Prep Method:**	3015	**Prep Date:**	11/10/2014 07:27
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/11/2014 14:05
Workgroup #:	WG500295	**Analyst:**	KHR	**Run Date:**	11/11/2014 14:44
Collect Date:	10/27/2014 09:00	**Dilution:**	1	**File ID:**	P2.111114.144424
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	14.7		0.500	0.250
Iron, Total	7439-89-6	0.0812	J	0.100	0.0500
Magnesium, Total	7439-95-4	7.31		0.500	0.250
Potassium, Total	7440-09-7	0.773	J	1.00	0.500
Sodium, Total	7440-23-5	88.6		0.500	0.250
Strontium, Total	7440-24-6	0.493		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:15
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/05/2014 14:27
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/05/2014 15:35
Collect Date:	10/27/2014 09:00	**Dilution:**	1	**File ID:**	NI.110514.153508
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0470		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.0250		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.000954	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000527	J	0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-24	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:15
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/06/2014 09:06
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/06/2014 16:17
Collect Date:	10/27/2014 09:00	**Dilution:**	1	**File ID:**	NI.110614.161735
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-25	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW14MS	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 16:02
Collect Date:	10/27/2014 09:10	**Dilution:**	1	**File ID:**	8M400968
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	20.5		10.0	2.50
Benzene	71-43-2	20.1		1.00	0.125
Bromobenzene	108-86-1	16.5		1.00	0.125
Bromochloromethane	74-97-5	21.0		1.00	0.200
Bromodichloromethane	75-27-4	20.4		1.00	0.250
Bromoform	75-25-2	16.6		1.00	0.500
Bromomethane	74-83-9	20.1		1.00	0.500
2-Butanone	78-93-3	21.9		10.0	2.50
n-Butylbenzene	104-51-8	14.8		1.00	0.250
sec-Butylbenzene	135-98-8	15.7		1.00	0.250
tert-Butylbenzene	98-06-6	14.6		1.00	0.250
Carbon disulfide	75-15-0	16.5		1.00	0.500
Carbon tetrachloride	56-23-5	19.4		1.00	0.250
Chlorobenzene	108-90-7	18.3		1.00	0.125
Chlorodibromomethane	124-48-1	18.0		1.00	0.250
Chloroethane	75-00-3	18.4		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	20.9		1.00	0.125
Chloromethane	74-87-3	16.9		1.00	0.500
2-Chlorotoluene	95-49-8	17.5		1.00	0.125
4-Chlorotoluene	106-43-4	15.4		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	16.3		5.00	1.00

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4	16.9		1.00	0.250
Dibromomethane	74-95-3	19.8		1.00	0.250
1,2-Dichlorobenzene	95-50-1	17.5		1.00	0.125
1,3-Dichlorobenzene	541-73-1	17.5		1.00	0.250
1,4-Dichlorobenzene	106-46-7	16.5		1.00	0.125
Dichlorodifluoromethane	75-71-8	21.1		1.00	0.250
1,1-Dichloroethane	75-34-3	22.3		1.00	0.125
1,2-Dichloroethane	107-06-2	19.8		1.00	0.250
1,1-Dichloroethene	75-35-4	43.6		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	28.2		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	17.8		1.00	0.250
1,2-Dichloropropane	78-87-5	19.4		1.00	0.200
1,3-Dichloropropane	142-28-9	17.0		1.00	0.200
2,2-Dichloropropane	594-20-7	19.0		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	21.1		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	16.1		1.00	0.500
1,1-Dichloropropene	563-58-6	18.2		1.00	0.250
Ethylbenzene	100-41-4	16.2		1.00	0.250
2-Hexanone	591-78-6	17.8		10.0	2.50
Hexachlorobutadiene	87-68-3	13.7		1.00	0.250
Isopropylbenzene	98-82-8	17.9		1.00	0.250
p-Isopropyltoluene	99-87-6	15.1		1.00	0.250
4-Methyl-2-pentanone	108-10-1	19.6		10.0	2.50
Methylene chloride	75-09-2	18.6		5.00	0.250
Naphthalene	91-20-3	22.7		1.00	0.200
n-Propylbenzene	103-65-1	15.4		1.00	0.125
Styrene	100-42-5	18.4		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	16.9		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	16.6		1.00	0.200
Tetrachloroethene	127-18-4	38.2		1.00	0.250
Toluene	108-88-3	17.2		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	20.2		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	17.8		1.00	0.200
1,1,1-Trichloroethane	71-55-6	19.1		1.00	0.250
1,1,2-Trichloroethane	79-00-5	17.6		1.00	0.250
Trichloroethene	79-01-6	82.9		1.00	0.250
Trichlorofluoromethane	75-69-4	17.9		1.00	0.250
1,2,3-Trichloropropane	96-18-4	16.6		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	15.7		1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8	16.2		1.00	0.250
Vinyl acetate	108-05-4	36.3		10.0	2.50
Vinyl chloride	75-01-4	18.3		1.00	0.250
o-Xylene	95-47-6	17.0		1.00	0.250
m-,p-Xylene	179601-23-1	34.5		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.7	86	118	
1,2-Dichloroethane-d4	87.7	80	120	
Toluene-d8	86.4	88	110	*
4-Bromofluorobenzene	91.1	86	115	

*	Surrogate or spike compound out of range
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-25
Client ID: 35BWW14MS
Matrix: Water
Workgroup #: WG500295
Collect Date: 10/27/2014 09:10
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:27
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 14:47
File ID: P2.111114.144750

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.01		0.200	0.100
Calcium, Total	7440-70-2	21.0		0.500	0.250
Iron, Total	7439-89-6	2.60		0.100	0.0500
Magnesium, Total	7439-95-4	13.8		0.500	0.250
Potassium, Total	7440-09-7	32.1		1.00	0.500
Sodium, Total	7440-23-5	117		0.500	0.250
Strontium, Total	7440-24-6	1.12		0.0500	0.0250

Sample #: L14101762-25
Client ID: 35BWW14MS
Matrix: Water
Workgroup #: WG499526
Collect Date: 10/27/2014 09:10
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/05/2014 11:15
Cal Date: 11/06/2014 09:06
Run Date: 11/06/2014 16:20
File ID: NI.110614.162044

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.0709		0.0250	0.0125

Microbac

Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-25	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14MS	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:15
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/05/2014 14:27
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/05/2014 15:38
Collect Date:	10/27/2014 09:10	**Dilution:**	1	**File ID:**	NI.110514.153817
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0642		0.00100	0.000500
Barium, Total	7440-39-3	0.109		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0635		0.000600	0.000300
Chromium, Total	7440-47-3	0.0666		0.00200	0.00100
Copper, Total	7440-50-8	0.0655		0.00200	0.00100
Lead, Total	7439-92-1	0.0650		0.00100	0.000500
Manganese, Total	7439-96-5	0.0928		0.00200	0.00100
Nickel, Total	7440-02-0	0.0624		0.00400	0.00200
Selenium, Total	7782-49-2	0.0662		0.00100	0.000500
Thallium, Total	7440-28-0	0.0638		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0665		0.00100	0.000500

Sample #:	L14101762-26	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW14MSD	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 16:32
Collect Date:	10/27/2014 09:20	**Dilution:**	1	**File ID:**	8M400969
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	19.9		10.0	2.50
Benzene	71-43-2	20.7		1.00	0.125
Bromobenzene	108-86-1	17.2		1.00	0.125
Bromochloromethane	74-97-5	21.0		1.00	0.200
Bromodichloromethane	75-27-4	21.2		1.00	0.250
Bromoform	75-25-2	16.7		1.00	0.500
Bromomethane	74-83-9	21.1		1.00	0.500
2-Butanone	78-93-3	21.2		10.0	2.50
n-Butylbenzene	104-51-8	15.6		1.00	0.250
sec-Butylbenzene	135-98-8	16.7		1.00	0.250
tert-Butylbenzene	98-06-6	15.2		1.00	0.250
Carbon disulfide	75-15-0	18.2		1.00	0.500
Carbon tetrachloride	56-23-5	20.5		1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Chlorobenzene	108-90-7	19.0		1.00	0.125
Chlorodibromomethane	124-48-1	18.5		1.00	0.250
Chloroethane	75-00-3	18.8		1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	21.7		1.00	0.125
Chloromethane	74-87-3	17.4		1.00	0.500
2-Chlorotoluene	95-49-8	18.7		1.00	0.125
4-Chlorotoluene	106-43-4	15.7		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	17.0		5.00	1.00
1,2-Dibromoethane	106-93-4	17.7		1.00	0.250
Dibromomethane	74-95-3	19.8		1.00	0.250
1,2-Dichlorobenzene	95-50-1	18.3		1.00	0.125
1,3-Dichlorobenzene	541-73-1	18.2		1.00	0.250
1,4-Dichlorobenzene	106-46-7	17.3		1.00	0.125
Dichlorodifluoromethane	75-71-8	23.2		1.00	0.250
1,1-Dichloroethane	75-34-3	23.2		1.00	0.125
1,2-Dichloroethane	107-06-2	19.8		1.00	0.250
1,1-Dichloroethene	75-35-4	47.2		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	29.2		1.00	0.250
trans-1,2-Dichloroethene	156-60-5	19.0		1.00	0.250
1,2-Dichloropropane	78-87-5	20.2		1.00	0.200
1,3-Dichloropropane	142-28-9	17.3		1.00	0.200
2,2-Dichloropropane	594-20-7	19.8		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	21.1		1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	16.2		1.00	0.500
1,1-Dichloropropene	563-58-6	19.0		1.00	0.250
Ethylbenzene	100-41-4	16.8		1.00	0.250
2-Hexanone	591-78-6	17.3		10.0	2.50
Hexachlorobutadiene	87-68-3	14.8		1.00	0.250
Isopropylbenzene	98-82-8	18.7		1.00	0.250
p-Isopropyltoluene	99-87-6	16.1		1.00	0.250
4-Methyl-2-pentanone	108-10-1	18.8		10.0	2.50
Methylene chloride	75-09-2	19.3		5.00	0.250
Naphthalene	91-20-3	23.4		1.00	0.200
n-Propylbenzene	103-65-1	16.4		1.00	0.125
Styrene	100-42-5	19.1		1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6	17.5		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	17.2		1.00	0.200
Tetrachloroethene	127-18-4	39.5		1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Toluene	108-88-3	17.9		1.00	0.250
1,2,3-Trichlorobenzene	87-61-6	21.6		1.00	0.150
1,2,4-Trichlorobenzene	120-82-1	18.7		1.00	0.200
1,1,1-Trichloroethane	71-55-6	19.8		1.00	0.250
1,1,2-Trichloroethane	79-00-5	18.1		1.00	0.250
Trichloroethene	79-01-6	83.4		1.00	0.250
Trichlorofluoromethane	75-69-4	20.4		1.00	0.250
1,2,3-Trichloropropane	96-18-4	17.2		1.00	0.500
1,2,4-Trimethylbenzene	95-63-6	16.7		1.00	0.250
1,3,5-Trimethylbenzene	108-67-8	17.3		1.00	0.250
Vinyl acetate	108-05-4	34.1		10.0	2.50
Vinyl chloride	75-01-4	19.3		1.00	0.250
o-Xylene	95-47-6	17.6		1.00	0.250
m-,p-Xylene	179601-23-1	35.9		1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.5	86	118	
1,2-Dichloroethane-d4	86.5	80	120	
Toluene-d8	87.7	88	110	*
4-Bromofluorobenzene	93.0	86	115	

*	Surrogate or spike compound out of range
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-26
Client ID: 35BWW14MSD
Matrix: Water
Workgroup #: WG500295
Collect Date: 10/27/2014 09:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:27
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 14:50
File ID: P2.111114.145016

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	6.19		0.200	0.100
Calcium, Total	7440-70-2	21.4		0.500	0.250
Iron, Total	7439-89-6	2.70		0.100	0.0500
Magnesium, Total	7439-95-4	14.2		0.500	0.250
Potassium, Total	7440-09-7	32.7		1.00	0.500
Sodium, Total	7440-23-5	120		0.500	0.250
Strontium, Total	7440-24-6	1.14		0.0500	0.0250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14MSD	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:15
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/05/2014 14:27
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/05/2014 15:41
Collect Date:	10/27/2014 09:20	**Dilution:**	1	**File ID:**	NI.110514.154126
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0	0.0678		0.00100	0.000500
Barium, Total	7440-39-3	0.115		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0675		0.000600	0.000300
Chromium, Total	7440-47-3	0.0700		0.00200	0.00100
Copper, Total	7440-50-8	0.0683		0.00200	0.00100
Lead, Total	7439-92-1	0.0674		0.00100	0.000500
Manganese, Total	7439-96-5	0.0952		0.00200	0.00100
Nickel, Total	7440-02-0	0.0651		0.00400	0.00200
Selenium, Total	7782-49-2	0.0690		0.00100	0.000500
Thallium, Total	7440-28-0	0.0677		0.000200	0.000100
Vanadium, Total	7440-62-2	0.0707		0.00100	0.000500

Sample #:	L14101762-26	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW14MSD	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:15
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/06/2014 09:06
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/06/2014 16:23
Collect Date:	10/27/2014 09:20	**Dilution:**	1	**File ID:**	NI.110614.162353
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6	0.0790		0.0250	0.0125

Sample #:	L14101762-27	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	TRIP BLANK 27OCTOBER14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 19:00
Collect Date:	10/27/2014 00:01	**Dilution:**	1	**File ID:**	8M400974
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2	0.308	J	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	96.0	86	118	
1,2-Dichloroethane-d4	89.9	80	120	
Toluene-d8	87.6	88	110	*
4-Bromofluorobenzene	99.1	86	115	

*	Surrogate or spike compound out of range
J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-28
Client ID: MW4-1
Matrix: Water
Workgroup #: WG498711
Collect Date: 10/27/2014 10:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/03/2014 19:42
Run Date: 10/30/2014 23:21
File ID: 8M400983

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.241	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.811	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.387	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	25.0		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.34		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.5	86	118	
1,2-Dichloroethane-d4	94.3	80	120	
Toluene-d8	87.4	88	110	*
4-Bromofluorobenzene	101	86	115	

*	Surrogate or spike compound out of range
J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-28	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MW4-1	**Prep Method:**	3015	**Prep Date:**	11/10/2014 07:51
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/11/2014 14:05
Workgroup #:	WG500296	**Analyst:**	KHR	**Run Date:**	11/11/2014 17:33
Collect Date:	10/27/2014 10:20	**Dilution:**	1	**File ID:**	P2.111114.173331
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	20.7		0.500	0.250
Iron, Total	7439-89-6	0.243		0.100	0.0500
Magnesium, Total	7439-95-4	9.99		0.500	0.250
Potassium, Total	7440-09-7	1.54		1.00	0.500
Sodium, Total	7440-23-5	90.6		0.500	0.250
Strontium, Total	7440-24-6	0.622		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW4-1	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:16
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/05/2014 14:27
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/05/2014 16:10
Collect Date:	10/27/2014 10:20	**Dilution:**	1	**File ID:**	NI.110514.161019
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0590		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Nickel, Total	7440-02-0	0.00250	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000704	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000763	J	0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW4-1	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:16
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/06/2014 09:06
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/06/2014 16:33
Collect Date:	10/27/2014 10:20	**Dilution:**	1	**File ID:**	NI.110614.163324
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-28	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW4-1	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:16
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/06/2014 09:06
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/06/2014 16:36
Collect Date:	10/27/2014 10:20	**Dilution:**	10	**File ID:**	NI.110614.163633
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.393		0.0200	0.0100

Sample #:	L14101762-29	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW4-1D	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 22:23
Collect Date:	10/27/2014 10:30	**Dilution:**	1	**File ID:**	8M400981
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.273	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.777	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.415	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	25.3		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	5.32		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.4	86	118	
1,2-Dichloroethane-d4	94.2	80	120	
Toluene-d8	89.1	88	110	
4-Bromofluorobenzene	101	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-29
Client ID: MW4-1D
Matrix: Water
Workgroup #: WG500296
Collect Date: 10/27/2014 10:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:51
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 17:36
File ID: P2.111114.173657

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	21.5		0.500	0.250
Iron, Total	7439-89-6	0.264		0.100	0.0500
Magnesium, Total	7439-95-4	10.5		0.500	0.250
Potassium, Total	7440-09-7	1.52		1.00	0.500
Sodium, Total	7440-23-5	95.7		0.500	0.250
Strontium, Total	7440-24-6	0.655		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW4-1D	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:16
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/06/2014 09:06
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/06/2014 16:39
Collect Date:	10/27/2014 10:30	**Dilution:**	1	**File ID:**	NI.110614.163942
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW4-1D	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:16
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/05/2014 14:27
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/05/2014 16:20
Collect Date:	10/27/2014 10:30	**Dilution:**	1	**File ID:**	NI.110514.162051
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0554		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1	0.00240		0.00100	0.000500
Nickel, Total	7440-02-0	0.00270	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.000539	J	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.000742	J	0.00100	0.000500

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-29	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW4-1D	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:16
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/06/2014 09:06
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/06/2014 16:42
Collect Date:	10/27/2014 10:30	**Dilution:**	10	**File ID:**	NI.110614.164250
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Manganese, Total	7439-96-5	0.451		0.0200	0.0100

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-30	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW4-2	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 20:28
Collect Date:	10/27/2014 11:45	**Dilution:**	1	**File ID:**	8M400977
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.220	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	1.07		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.297	J	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	3.74		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	3.09		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.8	86	118	
1,2-Dichloroethane-d4	92.8	80	120	
Toluene-d8	88.2	88	110	
4-Bromofluorobenzene	106	86	115	

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-30 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: MW4-2 **Prep Method:** 3015 **Prep Date:** 11/10/2014 07:51
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/11/2014 14:05
Workgroup #: WG500296 **Analyst:** KHR **Run Date:** 11/11/2014 17:43
Collect Date: 10/27/2014 11:45 **Dilution:** 1 **File ID:** P2.111114.174349
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	0.145	J	0.200	0.100
Calcium, Total	7440-70-2	8.53		0.500	0.250
Iron, Total	7439-89-6	0.153		0.100	0.0500
Magnesium, Total	7439-95-4	4.58		0.500	0.250
Potassium, Total	7440-09-7	0.996	J	1.00	0.500
Sodium, Total	7440-23-5	83.4		0.500	0.250
Strontium, Total	7440-24-6	0.256		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14101762-30 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: MW4-2 **Prep Method:** 3015 **Prep Date:** 11/05/2014 11:16
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/05/2014 14:27
Workgroup #: WG499526 **Analyst:** JYH **Run Date:** 11/05/2014 16:24
Collect Date: 10/27/2014 11:45 **Dilution:** 1 **File ID:** NI.110514.162400
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0439		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.00412		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00119		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00165		0.00100	0.000500

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-30	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MW4-2	**Prep Method:**	3015	**Prep Date:**	11/05/2014 11:16
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/06/2014 09:06
Workgroup #:	WG499526	**Analyst:**	JYH	**Run Date:**	11/06/2014 16:45
Collect Date:	10/27/2014 11:45	**Dilution:**	1	**File ID:**	NI.110614.164559
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-31	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	MW4-3	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 20:56
Collect Date:	10/27/2014 13:20	**Dilution:**	1	**File ID:**	8M400978
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3	0.135	J	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	1.57		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	1.33		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250

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Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.6	86	118	
1,2-Dichloroethane-d4	94.2	80	120	
Toluene-d8	88.3	88	110	
4-Bromofluorobenzene	104	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-31
Client ID: MW4-3
Matrix: Water
Workgroup #: WG500295
Collect Date: 10/27/2014 13:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:27
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 14:52
File ID: P2.111114.145243

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.01		0.200	0.100
Calcium, Total	7440-70-2	2.95		0.500	0.250
Iron, Total	7439-89-6	2.70		0.100	0.0500
Magnesium, Total	7439-95-4	1.42		0.500	0.250
Potassium, Total	7440-09-7	0.675	J	1.00	0.500
Sodium, Total	7440-23-5	66.8		0.500	0.250
Strontium, Total	7440-24-6	0.0734		0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14101762-31
Client ID: MW4-3
Matrix: Water
Workgroup #: WG500177
Collect Date: 10/27/2014 13:20
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/08/2014 08:46
Cal Date: 11/10/2014 14:26
Run Date: 11/10/2014 16:46
File ID: NI.111014.164645

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0692		0.00300	0.00150

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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00447		0.00200	0.00100
Copper, Total	7440-50-8	0.00179	J	0.00200	0.00100
Lead, Total	7439-92-1	0.000794	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0189		0.00200	0.00100
Nickel, Total	7440-02-0	0.00462		0.00400	0.00200
Selenium, Total	7782-49-2	0.00257		0.00100	0.000500
Thallium, Total	7440-28-0	0.000117	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00671		0.00100	0.000500
Zinc, Total	7440-66-6	0.0131	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-32
Client ID: 35BWW17
Matrix: Water
Workgroup #: WG498711
Collect Date: 10/27/2014 15:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/03/2014 19:42
Run Date: 10/30/2014 21:25
File ID: 8M400979

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250

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Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	98.4	86	118	
1,2-Dichloroethane-d4	93.9	80	120	
Toluene-d8	88.2	88	110	
4-Bromofluorobenzene	103	86	115	

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-32
Client ID: 35BWW17
Matrix: Water
Workgroup #: WG500295
Collect Date: 10/27/2014 15:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:27
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 14:56
File ID: P2.111114.145606

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	3.99		0.200	0.100
Calcium, Total	7440-70-2	1.46		0.500	0.250
Iron, Total	7439-89-6	10.9		0.100	0.0500
Magnesium, Total	7439-95-4	1.12		0.500	0.250
Potassium, Total	7440-09-7	1.30		1.00	0.500
Sodium, Total	7440-23-5	15.6		0.500	0.250
Strontium, Total	7440-24-6	0.0425	J	0.0500	0.0250

J	Estimated value; the analyte concentration was less than the RL/LOQ.

Sample #: L14101762-32
Client ID: 35BWW17
Matrix: Water
Workgroup #: WG500177
Collect Date: 10/27/2014 15:00
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/08/2014 08:46
Cal Date: 11/10/2014 14:26
Run Date: 11/10/2014 16:49
File ID: NI.111014.164954

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0698		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00598		0.00200	0.00100
Copper, Total	7440-50-8	0.00517		0.00200	0.00100
Lead, Total	7439-92-1	0.00339		0.00100	0.000500
Manganese, Total	7439-96-5	0.0397		0.00200	0.00100
Nickel, Total	7440-02-0	0.00743		0.00400	0.00200
Selenium, Total	7782-49-2	0.00173		0.00100	0.000500
Thallium, Total	7440-28-0	0.000113	J	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00657		0.00100	0.000500
Zinc, Total	7440-66-6	0.112		0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-33
Client ID: 35BWW09
Matrix: Water
Workgroup #: WG498711
Collect Date: 10/28/2014 08:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 5030B/5030C/5035A
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS8
Prep Date: N/A
Cal Date: 10/03/2014 19:42
Run Date: 10/31/2014 00:48
File ID: 8M400986

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00

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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4	0.663	J	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	1.31		1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	181		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.7	86	118	
1,2-Dichloroethane-d4	95.3	80	120	
Toluene-d8	90.6	88	110	
4-Bromofluorobenzene	98.7	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-33
Client ID: 35BWW09
Matrix: Water
Workgroup #: WG500295
Collect Date: 10/28/2014 08:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:27
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 15:11
File ID: P2.111114.151104

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2	44.8		0.500	0.250
Iron, Total	7439-89-6	0.140		0.100	0.0500
Magnesium, Total	7439-95-4	23.8		0.500	0.250
Potassium, Total	7440-09-7	1.73		1.00	0.500
Sodium, Total	7440-23-5	149		0.500	0.250
Strontium, Total	7440-24-6	1.42		0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-33	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW09	**Prep Method:**	3015	**Prep Date:**	11/08/2014 08:46
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/10/2014 14:26
Workgroup #:	WG500177	**Analyst:**	JYH	**Run Date:**	11/10/2014 16:53
Collect Date:	10/28/2014 08:40	**Dilution:**	1	**File ID:**	NI.111014.165302
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500
Barium, Total	7440-39-3	0.0410		0.00300	0.00150
Cadmium, Total	7440-43-9	0.000510	J	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8	0.00101	J	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5	0.133		0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2	0.00351		0.00100	0.000500
Thallium, Total	7440-28-0	0.000102	J	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #:	L14101762-34	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	FIELD BLANK 28OCTOBER14	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 19:30
Collect Date:	10/28/2014 08:30	**Dilution:**	1	**File ID:**	8M400975
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1	4.72	J	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250

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Lab Report #: L14101762
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Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3	0.181	J	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		ND	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125

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Lab Project #: 3083.001
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Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Styrene	100-42-5	0.149	J	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4		ND	1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6		ND	1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.2	86	118	
1,2-Dichloroethane-d4	94.4	80	120	
Toluene-d8	89.1	88	110	
4-Bromofluorobenzene	104	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-34
Client ID: FIELD BLANK 28OCTOBER14
Matrix: Water
Workgroup #: WG500295
Collect Date: 10/28/2014 08:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 11/10/2014 07:27
Cal Date: 11/11/2014 14:05
Run Date: 11/11/2014 15:14
File ID: P2.111114.151430

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5		ND	0.200	0.100
Calcium, Total	7440-70-2		ND	0.500	0.250
Iron, Total	7439-89-6		ND	0.100	0.0500
Magnesium, Total	7439-95-4		ND	0.500	0.250
Potassium, Total	7440-09-7		ND	1.00	0.500

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
Sodium, Total	7440-23-5		ND	0.500	0.250
Strontium, Total	7440-24-6		ND	0.0500	0.0250

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-34
Client ID: FIELD BLANK 28OCTOBER14
Matrix: Water
Workgroup #: WG500181
Collect Date: 10/28/2014 08:30
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/10/2014 09:18
Cal Date: 11/11/2014 12:45
Run Date: 11/11/2014 14:56
File ID: NI.111114.145656

Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3		ND	0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3		ND	0.00200	0.00100
Copper, Total	7440-50-8		ND	0.00200	0.00100
Lead, Total	7439-92-1		ND	0.00100	0.000500
Manganese, Total	7439-96-5		ND	0.00200	0.00100
Nickel, Total	7440-02-0		ND	0.00400	0.00200
Selenium, Total	7782-49-2		ND	0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2		ND	0.00100	0.000500
Zinc, Total	7440-66-6		ND	0.0250	0.0125

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-34
Client ID: FIELD BLANK 28OCTOBER14
Matrix: Water
Workgroup #: WG500181
Collect Date: 10/28/2014 08:30
Sample Tag: 02

PrePrep Method: N/A
Prep Method: 3015
Analytical Method: 6020
Analyst: JYH
Dilution: 1
Units: mg/L

Instrument: ICP-MS2
Prep Date: 11/10/2014 09:18
Cal Date: 11/12/2014 12:17
Run Date: 11/12/2014 14:09
File ID: NI.111214.140928

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-35	**PrePrep Method:**	N/A	**Instrument:**	HPMS8
Client ID:	35BWW20	**Prep Method:**	5030B/5030C/5035A	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	8260B	**Cal Date:**	10/03/2014 19:42
Workgroup #:	WG498711	**Analyst:**	TMB	**Run Date:**	10/30/2014 23:50
Collect Date:	10/28/2014 10:15	**Dilution:**	1	**File ID:**	8M400984
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
Acetone	67-64-1		ND	10.0	2.50
Benzene	71-43-2		ND	1.00	0.125
Bromobenzene	108-86-1		ND	1.00	0.125
Bromochloromethane	74-97-5		ND	1.00	0.200
Bromodichloromethane	75-27-4		ND	1.00	0.250
Bromoform	75-25-2		ND	1.00	0.500
Bromomethane	74-83-9		ND	1.00	0.500
2-Butanone	78-93-3		ND	10.0	2.50
n-Butylbenzene	104-51-8		ND	1.00	0.250
sec-Butylbenzene	135-98-8		ND	1.00	0.250
tert-Butylbenzene	98-06-6		ND	1.00	0.250
Carbon disulfide	75-15-0		ND	1.00	0.500
Carbon tetrachloride	56-23-5		ND	1.00	0.250
Chlorobenzene	108-90-7		ND	1.00	0.125
Chlorodibromomethane	124-48-1		ND	1.00	0.250
Chloroethane	75-00-3		ND	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		ND	10.0	2.00
Chloroform	67-66-3		ND	1.00	0.125
Chloromethane	74-87-3		ND	1.00	0.500
2-Chlorotoluene	95-49-8		ND	1.00	0.125
4-Chlorotoluene	106-43-4		ND	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		ND	5.00	1.00
1,2-Dibromoethane	106-93-4		ND	1.00	0.250
Dibromomethane	74-95-3		ND	1.00	0.250
1,2-Dichlorobenzene	95-50-1		ND	1.00	0.125
1,3-Dichlorobenzene	541-73-1		ND	1.00	0.250
1,4-Dichlorobenzene	106-46-7		ND	1.00	0.125
Dichlorodifluoromethane	75-71-8		ND	1.00	0.250
1,1-Dichloroethane	75-34-3		ND	1.00	0.125
1,2-Dichloroethane	107-06-2		ND	1.00	0.250
1,1-Dichloroethene	75-35-4		ND	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	0.479	J	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		ND	1.00	0.250

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

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Analyte	CAS #	Result	Qual	RL	MDL
1,2-Dichloropropane	78-87-5		ND	1.00	0.200
1,3-Dichloropropane	142-28-9		ND	1.00	0.200
2,2-Dichloropropane	594-20-7		ND	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		ND	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		ND	1.00	0.500
1,1-Dichloropropene	563-58-6		ND	1.00	0.250
Ethylbenzene	100-41-4		ND	1.00	0.250
2-Hexanone	591-78-6		ND	10.0	2.50
Hexachlorobutadiene	87-68-3		ND	1.00	0.250
Isopropylbenzene	98-82-8		ND	1.00	0.250
p-Isopropyltoluene	99-87-6		ND	1.00	0.250
4-Methyl-2-pentanone	108-10-1		ND	10.0	2.50
Methylene chloride	75-09-2		ND	5.00	0.250
Naphthalene	91-20-3		ND	1.00	0.200
n-Propylbenzene	103-65-1		ND	1.00	0.125
Styrene	100-42-5		ND	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		ND	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		ND	1.00	0.200
Tetrachloroethene	127-18-4	39.2		1.00	0.250
Toluene	108-88-3		ND	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		ND	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		ND	1.00	0.200
1,1,1-Trichloroethane	71-55-6		ND	1.00	0.250
1,1,2-Trichloroethane	79-00-5		ND	1.00	0.250
Trichloroethene	79-01-6	12.1		1.00	0.250
Trichlorofluoromethane	75-69-4		ND	1.00	0.250
1,2,3-Trichloropropane	96-18-4		ND	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		ND	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		ND	1.00	0.250
Vinyl acetate	108-05-4		ND	10.0	2.50
Vinyl chloride	75-01-4		ND	1.00	0.250
o-Xylene	95-47-6		ND	1.00	0.250
m-,p-Xylene	179601-23-1		ND	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Dibromofluoromethane	97.6	86	118	
1,2-Dichloroethane-d4	93.6	80	120	
Toluene-d8	88.4	88	110	
4-Bromofluorobenzene	103	86	115	

J	Estimated value; the analyte concentration was less than the RL/LOQ.

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

ND	Not detected at or above the reporting limit (RL/MDL).

Sample #: L14101762-35 **PrePrep Method:** N/A **Instrument:** PE-ICP2
Client ID: 35BWW20 **Prep Method:** 3015 **Prep Date:** 11/10/2014 07:27
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 11/11/2014 14:05
Workgroup #: WG500295 **Analyst:** KHR **Run Date:** 11/11/2014 15:17
Collect Date: 10/28/2014 10:15 **Dilution:** 1 **File ID:** P2.111114.151751
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Aluminum, Total	7429-90-5	1.53		0.200	0.100
Calcium, Total	7440-70-2	5.30		0.500	0.250
Iron, Total	7439-89-6	3.40		0.100	0.0500
Magnesium, Total	7439-95-4	2.49		0.500	0.250
Potassium, Total	7440-09-7	3.73		1.00	0.500
Sodium, Total	7440-23-5	73.9		0.500	0.250
Strontium, Total	7440-24-6	0.168		0.0500	0.0250

Sample #: L14101762-35 **PrePrep Method:** N/A **Instrument:** ICP-MS2
Client ID: 35BWW20 **Prep Method:** 3015 **Prep Date:** 11/10/2014 09:18
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 11/11/2014 12:45
Workgroup #: WG500181 **Analyst:** JYH **Run Date:** 11/11/2014 15:00
Collect Date: 10/28/2014 10:15 **Dilution:** 1 **File ID:** NI.111114.150005
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	RL	MDL
Barium, Total	7440-39-3	0.108		0.00300	0.00150
Cadmium, Total	7440-43-9		ND	0.000600	0.000300
Chromium, Total	7440-47-3	0.00608		0.00200	0.00100
Copper, Total	7440-50-8	0.00263		0.00200	0.00100
Lead, Total	7439-92-1	0.00245		0.00100	0.000500
Manganese, Total	7439-96-5	0.0185		0.00200	0.00100
Nickel, Total	7440-02-0	0.00528		0.00400	0.00200
Selenium, Total	7782-49-2	0.0823		0.00100	0.000500
Thallium, Total	7440-28-0		ND	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00737		0.00100	0.000500
Zinc, Total	7440-66-6	0.0176	J	0.0250	0.0125

J	Estimated value; the analyte concentration was less than the RL/LOQ.
ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

Sample #:	L14101762-35	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35BWW20	**Prep Method:**	3015	**Prep Date:**	11/10/2014 09:18
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/12/2014 12:17
Workgroup #:	WG500181	**Analyst:**	JYH	**Run Date:**	11/12/2014 14:12
Collect Date:	10/28/2014 10:15	**Dilution:**	1	**File ID:**	NI.111214.141237
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	RL	MDL
Antimony, Total	7440-36-0		ND	0.00100	0.000500

ND	Not detected at or above the reporting limit (RL/MDL).

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Lab Report #: L14101762
Lab Project #: 3083.001
Project Name: Longhorn AAP
Lab Contact: Kathy Albertson

Certificate of Analysis

METHOD BLANK SUMMARY

Login Number: L14101762
Work Group: WG498613
Blank File ID: 17M009015
Blank Sample ID: WG498613-01
Prep Date: 10/29/14 15:35
Instrument ID: HPMS17
Analyzed Date: 10/29/14 15:35
Method: 8260B
Analyst: ADC

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG498613-02	17M009016	10/29/14 15:55	01
35BWW03MS	L14101762-12	17M009017	10/29/14 16:15	01
35BWW03MSD	L14101762-13	17M009018	10/29/14 16:35	01
TRIP BLANK 21OCTOBER14	L14101762-05	17M009021	10/29/14 17:34	01
TRIP BLANK 22OCTOBER14	L14101762-07	17M009022	10/29/14 17:54	01
TRIP BLANK 23OCTOBER14	L14101762-14	17M009023	10/29/14 18:14	01
FIELD BLANK 23OCTOBER14	L14101762-15	17M009024	10/29/14 18:34	01
MW1-1	L14101762-01	17M009025	10/29/14 18:54	01
MW1-2	L14101762-02	17M009026	10/29/14 19:14	01
35BWW10	L14101762-03	17M009027	10/29/14 19:34	01
35BWW10D	L14101762-04	17M009028	10/29/14 19:54	01
35BWW08	L14101762-06	17M009029	10/29/14 20:14	01
MW2-1	L14101762-08	17M009030	10/29/14 20:34	01
MW2-2	L14101762-09	17M009031	10/29/14 20:54	01
MW2-3	L14101762-10	17M009032	10/29/14 21:23	01
35BWW03	L14101762-11	17M009033	10/29/14 21:43	01
MW3-1	L14101762-16	17M009034	10/29/14 22:03	01
MW3-2	L14101762-17	17M009035	10/29/14 22:23	01
MW3-3	L14101762-18	17M009036	10/29/14 22:43	01
LHS-MW-58	L14101762-19	17M009037	10/29/14 23:03	01
35BWW04	L14101762-20	17M009038	10/29/14 23:23	01

Report Name: BLANK_SUMMARY
PDF File ID: 3842675
Report generated 11/10/2014 16:18

METHOD BLANK SUMMARY

Login Number: L14101762
Work Group: WG498711
Blank File ID: 8M400966
Blank Sample ID: WG498711-01
Prep Date: 10/30/14 15:03
Instrument ID: HPMS8
Analyzed Date: 10/30/14 15:03
Method: 8260B
Analyst: TMB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG498711-02	8M400967	10/30/14 15:34	01
35BWW14MS	L14101762-25	8M400968	10/30/14 16:02	01
35BWW14MSD	L14101762-26	8M400969	10/30/14 16:32	01
TRIP BLANK 27OCTOBER14	L14101762-27	8M400974	10/30/14 19:00	01
FIELD BLANK 28OCTOBER14	L14101762-34	8M400975	10/30/14 19:30	01
35BWW06	L14101762-22	8M400976	10/30/14 19:59	01
MW4-2	L14101762-30	8M400977	10/30/14 20:28	01
MW4-3	L14101762-31	8M400978	10/30/14 20:56	01
35BWW17	L14101762-32	8M400979	10/30/14 21:25	01
35BWW05	L14101762-21	8M400980	10/30/14 21:54	01
MW4-1D	L14101762-29	8M400981	10/30/14 22:23	01
35BWW08	L14101762-23	8M400982	10/30/14 22:51	01
MW4-1	L14101762-28	8M400983	10/30/14 23:21	01
35BWW20	L14101762-35	8M400984	10/30/14 23:50	01
35BWW14	L14101762-24	8M400985	10/31/14 00:19	01
35BWW09	L14101762-33	8M400986	10/31/14 00:48	01

Report Name: BLANK_SUMMARY
PDF File ID: 3842675
Report generated 11/10/2014 16:18

Login Number:L14101762 Prep Date:10/29/14 15:35 Sample ID:WG498613-01
Instrument ID:HPMS17 Run Date:10/29/14 15:35 Prep Method:5030B/5030C/503
File ID:17M009015 Analyst:ADC Method:8260B
Workgroup (AAB#):WG498613 Matrix:Water Units:ug/L
Contract #: Cal ID:HPMS17-03-OCT-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3842676
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Login Number: L14101762 Prep Date: 10/29/14 15:35 Sample ID: WG498613-01
Instrument ID: HPMS17 Run Date: 10/29/14 15:35 Prep Method: 5030B/5030C/503
File ID: 17M009015 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG498613 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS17-03-OCT-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	103	86 - 118	PASS
1,2-Dichloroethane-d4	94.5	80 - 120	PASS
Toluene-d8	99.4	88 - 110	PASS
4-Bromofluorobenzene	87.9	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3842676
10-NOV-2014 16:18

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 10/30/14 15:03 Sample ID: WG498711-01
Instrument ID: HPMS8 Run Date: 10/30/14 15:03 Prep Method: 5030B/5030C/503
File ID: 8M400966 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG498711 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-03-OCT-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.500	1.00	0.500	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name:BLANK
PDF ID: 3842676
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Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 10/30/14 15:03 Sample ID: WG498711-01
Instrument ID: HPMS8 Run Date: 10/30/14 15:03 Prep Method: 5030B/5030C/503
File ID: 8M400966 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG498711 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-03-OCT-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.390	1	J
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.200	1.00	0.200	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	98.9	86 - 118	PASS
1,2-Dichloroethane-d4	89.7	80 - 120	PASS
Toluene-d8	87.9	88 - 110	FAIL
4-Bromofluorobenzene	102	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3842676
10-NOV-2014 16:18

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 10/29/2014 Sample ID: WG498613-02
Instrument ID: HPMS17 Run Time: 15:55 Prep Method: 5030B/5030C/503
File ID: 17M009016 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG498613 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD67093 Cal ID: HPMS17-03-OCT-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	19.6	98.2	40 - 180	
Benzene	20.0	19.3	96.5	80 - 121	
Bromobenzene	20.0	17.5	87.5	80 - 120	
Bromochloromethane	20.0	19.6	98.1	65 - 130	
Bromodichloromethane	20.0	19.5	97.7	80 - 131	
Bromoform	20.0	21.1	105	70 - 130	
Bromomethane	20.0	16.7	83.6	30 - 145	
2-Butanone	20.0	19.1	95.5	10 - 170	
n-Butylbenzene	20.0	16.9	84.7	80 - 131	
sec-Butylbenzene	20.0	16.9	84.6	80 - 127	
tert-Butylbenzene	20.0	17.2	86.0	80 - 126	
Carbon disulfide	20.0	12.3	61.3	58 - 128	
Carbon tetrachloride	20.0	20.4	102	65 - 140	
Chlorobenzene	20.0	20.1	100	80 - 120	
Chlorodibromomethane	20.0	20.0	99.9	60 - 135	
Chloroethane	20.0	14.6	72.9	60 - 135	
2-Chloroethyl vinyl ether	20.0	17.8	89.2	45 - 160	
Chloroform	20.0	20.2	101	80 - 125	
Chloromethane	20.0	16.0	80.2	40 - 125	
2-Chlorotoluene	20.0	17.1	85.6	80 - 127	
4-Chlorotoluene	20.0	17.2	85.8	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	16.8	84.2	50 - 130	
1,2-Dibromoethane	20.0	19.1	95.6	80 - 129	
Dibromomethane	20.0	20.4	102	75 - 125	
1,2-Dichlorobenzene	20.0	18.1	90.3	80 - 125	
1,3-Dichlorobenzene	20.0	18.3	91.4	80 - 120	
1,4-Dichlorobenzene	20.0	17.3	86.5	80 - 120	
Dichlorodifluoromethane	20.0	24.4	122	40 - 160	
1,1-Dichloroethane	20.0	18.9	94.3	80 - 125	
1,2-Dichloroethane	20.0	19.1	95.6	80 - 129	
1,1-Dichloroethene	20.0	17.9	89.4	80 - 132	
cis-1,2-Dichloroethene	20.0	19.5	97.5	70 - 125	
trans-1,2-Dichloroethene	20.0	19.1	95.6	80 - 127	
1,2-Dichloropropane	20.0	18.7	93.5	80 - 120	
1,3-Dichloropropane	20.0	18.3	91.3	80 - 120	
2,2-Dichloropropane	20.0	19.8	99.1	80 - 133	
cis-1,3-Dichloropropene	20.0	19.9	99.4	70 - 130	
trans-1,3-Dichloropropene	20.0	19.0	95.0	80 - 130	
1,1-Dichloropropene	20.0	19.1	95.6	75 - 130	
Ethylbenzene	20.0	19.3	96.6	80 - 122	
2-Hexanone	20.0	17.9	89.3	55 - 130	

LCS - Modified 03/06/2008
PDF File ID: 3842678
Report generated: 11/10/2014 16:18

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 10/29/2014 Sample ID: WG498613-02
Instrument ID: HPMS17 Run Time: 15:55 Prep Method: 5030B/5030C/503
File ID: 17M009016 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG498613 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD67093 Cal ID: HPMS17-03-OCT-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	15.8	79.0	72 - 132	
Isopropylbenzene	20.0	20.0	100	80 - 122	
p-Isopropyltoluene	20.0	16.8	84.2	80 - 122	
4-Methyl-2-pentanone	20.0	19.0	95.0	64 - 140	
Methylene chloride	20.0	18.9	94.5	80 - 123	
Naphthalene	20.0	13.6	68.1	59 - 149	
n-Propylbenzene	20.0	17.0	85.2	80 - 129	
Styrene	20.0	19.5	97.6	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	19.0	94.9	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	15.5	77.3	79 - 125	*
Tetrachloroethene	20.0	20.2	101	80 - 124	
Toluene	20.0	18.8	94.2	80 - 124	
1,2,3-Trichlorobenzene	20.0	16.8	84.0	55 - 140	
1,2,4-Trichlorobenzene	20.0	18.0	90.1	65 - 135	
1,1,1-Trichloroethane	20.0	20.5	102	80 - 134	
1,1,2-Trichloroethane	20.0	18.7	93.6	80 - 125	
Trichloroethene	20.0	20.3	101	80 - 122	
Trichlorofluoromethane	20.0	21.8	109	62 - 151	
1,2,3-Trichloropropane	20.0	16.5	82.4	75 - 125	
1,2,4-Trimethylbenzene	20.0	16.7	83.5	80 - 125	
1,3,5-Trimethylbenzene	20.0	17.0	84.8	80 - 127	
Vinyl acetate	20.0	31.7	159	10 - 190	
Vinyl chloride	20.0	18.1	90.7	50 - 170	
o-Xylene	20.0	19.9	99.3	80 - 122	
m-,p-Xylene	40.0	39.6	98.9	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	107	86 - 118	PASS
1,2-Dichloroethane-d4	96.8	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	88.5	86 - 115	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3842678
Report generated: 11/10/2014 16:18

Login Number: L14101762 Run Date: 10/30/2014 Sample ID: WG498711-02
Instrument ID: HPMS8 Run Time: 15:34 Prep Method: 5030B/5030C/503
File ID: 8M400967 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG498711 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD67092 Cal ID: HPMS8-03-OCT-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acetone	20.0	22.6	113	40 - 180	
Benzene	20.0	23.0	115	80 - 121	
Bromobenzene	20.0	18.6	93.2	80 - 120	
Bromochloromethane	20.0	23.5	117	65 - 130	
Bromodichloromethane	20.0	22.9	114	80 - 131	
Bromoform	20.0	17.3	86.4	70 - 130	
Bromomethane	20.0	20.6	103	30 - 145	
2-Butanone	20.0	22.7	114	10 - 170	
n-Butylbenzene	20.0	17.2	85.9	80 - 131	
sec-Butylbenzene	20.0	18.5	92.4	80 - 127	
tert-Butylbenzene	20.0	17.0	84.8	80 - 126	
Carbon disulfide	20.0	19.1	95.5	58 - 128	
Carbon tetrachloride	20.0	23.1	116	65 - 140	
Chlorobenzene	20.0	20.3	101	80 - 120	
Chlorodibromomethane	20.0	19.9	99.5	60 - 135	
Chloroethane	20.0	21.6	108	60 - 135	
2-Chloroethyl vinyl ether	20.0	22.5	113	45 - 160	
Chloroform	20.0	23.4	117	80 - 125	
Chloromethane	20.0	18.9	94.5	40 - 125	
2-Chlorotoluene	20.0	19.7	98.7	80 - 127	
4-Chlorotoluene	20.0	17.7	88.3	80 - 126	
1,2-Dibromo-3-chloropropane	20.0	17.5	87.3	50 - 130	
1,2-Dibromoethane	20.0	18.7	93.5	80 - 129	
Dibromomethane	20.0	22.2	111	75 - 125	
1,2-Dichlorobenzene	20.0	19.5	97.5	80 - 125	
1,3-Dichlorobenzene	20.0	19.5	97.4	80 - 120	
1,4-Dichlorobenzene	20.0	18.3	91.7	80 - 120	
Dichlorodifluoromethane	20.0	24.2	121	40 - 160	
1,1-Dichloroethane	20.0	21.7	108	80 - 125	
1,2-Dichloroethane	20.0	21.6	108	80 - 129	
1,1-Dichloroethene	20.0	18.0	90.2	80 - 132	
cis-1,2-Dichloroethene	20.0	22.0	110	70 - 125	
trans-1,2-Dichloroethene	20.0	19.7	98.3	80 - 127	
1,2-Dichloropropane	20.0	21.7	109	80 - 120	
1,3-Dichloropropane	20.0	18.8	93.9	80 - 120	
2,2-Dichloropropane	20.0	21.9	110	80 - 133	
cis-1,3-Dichloropropene	20.0	23.2	116	70 - 130	
trans-1,3-Dichloropropene	20.0	17.7	88.5	80 - 130	
1,1-Dichloropropene	20.0	21.7	108	75 - 130	
Ethylbenzene	20.0	18.6	92.9	80 - 122	
2-Hexanone	20.0	18.1	90.6	55 - 130	

LCS - Modified 03/06/2008
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Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 10/30/2014 Sample ID: WG498711-02
Instrument ID: HPMS8 Run Time: 15:34 Prep Method: 5030B/5030C/503
File ID: 8M400967 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG498711 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD67092 Cal ID: HPMS8-03-OCT-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	16.2	80.9	72 - 132	
Isopropylbenzene	20.0	20.8	104	80 - 122	
p-Isopropyltoluene	20.0	17.7	88.4	80 - 122	
4-Methyl-2-pentanone	20.0	22.0	110	64 - 140	
Methylene chloride	20.0	20.7	103	80 - 123	
Naphthalene	20.0	24.0	120	59 - 149	
n-Propylbenzene	20.0	17.9	89.4	80 - 129	
Styrene	20.0	20.9	104	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	19.0	95.0	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	18.1	90.4	79 - 125	
Tetrachloroethene	20.0	19.3	96.7	80 - 124	
Toluene	20.0	19.7	98.5	80 - 124	
1,2,3-Trichlorobenzene	20.0	21.8	109	55 - 140	
1,2,4-Trichlorobenzene	20.0	19.6	97.9	65 - 135	
1,1,1-Trichloroethane	20.0	22.2	111	80 - 134	
1,1,2-Trichloroethane	20.0	19.4	97.2	80 - 125	
Trichloroethene	20.0	22.3	111	80 - 122	
Trichlorofluoromethane	20.0	21.1	106	62 - 151	
1,2,3-Trichloropropane	20.0	17.6	88.2	75 - 125	
1,2,4-Trimethylbenzene	20.0	17.8	88.8	80 - 125	
1,3,5-Trimethylbenzene	20.0	18.6	93.1	80 - 127	
Vinyl acetate	20.0	35.2	176	10 - 190	
Vinyl chloride	20.0	19.4	97.0	50 - 170	
o-Xylene	20.0	19.5	97.4	80 - 122	
m-,p-Xylene	40.0	39.7	99.3	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	98.6	86 - 118	PASS
1,2-Dichloroethane-d4	88.9	80 - 120	PASS
Toluene-d8	87.1	88 - 110	FAIL
4-Bromofluorobenzene	91.1	86 - 115	PASS

* EXCEEDS %REC LIMIT

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14101762 Cal ID: HPMS17- 03-OCT-14 Worknum: WG498613

Instrument ID: HPMS17 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14101762-11 File ID: 17M009033 Dil: 1 Method: 5035A

Sample ID: L14101762-12 MS File ID: 17M009017 Dil: 1 Matrix: 8260B

Sample ID: L14101762-13 MSD File ID: 17M009018 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	19.8	98.8	20.0	18.8	93.8	5.15	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	21.3	107	20.0	20.2	101	5.41	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	15.9	79.5	20.0	15.4	76.9	3.32	79 - 125	20	*
1,1,2-Trichloroethane	ND	20.0	19.0	95	20.0	18.1	90.4	4.89	80 - 125	20	
1,1-Dichloroethane	ND	20.0	19.8	98.8	20.0	18.6	92.8	6.21	80 - 125	20	
1,1-Dichloroethene	ND	20.0	18.5	92.7	20.0	17.3	86.4	7.12	80 - 132	20	
1,1-Dichloropropene	ND	20.0	20.5	102	20.0	19.0	95.2	7.14	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	17.8	88.9	20.0	17.0	85.1	4.39	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	16.6	83.2	20.0	16.0	80.2	3.74	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	19.0	94.9	20.0	18.0	90.2	5.08	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	17.9	89.3	20.0	16.8	83.8	6.35	80 - 125	20	
1,2-Dibromo-3-chloropropane	ND	20.0	16.9	84.7	20.0	16.7	83.6	1.30	50 - 130	20	
1,2-Dibromoethane	ND	20.0	19.5	97.5	20.0	18.7	93.7	3.99	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	18.9	94.7	20.0	18.0	89.8	5.34	80 - 125	20	
1,2-Dichloroethane	ND	20.0	19.6	98.2	20.0	18.8	94	4.44	80 - 129	20	
1,2-Dichloropropane	ND	20.0	19.4	97	20.0	18.4	91.8	5.47	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	18.1	90.7	20.0	17.0	84.8	6.73	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	19.5	97.4	20.0	18.3	91.3	6.46	80 - 120	20	
1,3-Dichloropropane	ND	20.0	18.4	92.2	20.0	17.5	87.3	5.43	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	18.4	92.2	20.0	17.2	86.2	6.65	80 - 120	20	
2,2-Dichloropropane	ND	20.0	21.5	108	20.0	20.0	100	7.09	80 - 133	20	
2-Butanone	ND	20.0	19.2	96.2	20.0	18.7	93.3	2.97	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	18.2	90.8	20.0	17.0	85.1	6.48	80 - 127	20	
2-Hexanone	ND	20.0	18.6	92.9	20.0	17.9	89.3	3.96	55 - 130	20	
4-Chlorotoluene	ND	20.0	18.7	93.6	20.0	17.5	87.5	6.68	80 - 126	20	
4-Methyl-2-pentanone	ND	20.0	19.3	96.3	20.0	18.3	91.3	5.31	64 - 140	20	
Acetone	ND	20.0	19.9	99.4	20.0	18.7	93.6	6.03	40 - 180	20	
Benzene	ND	20.0	20.4	102	20.0	19.0	95	7.11	80 - 121	20	
Bromobenzene	ND	20.0	18.5	92.6	20.0	17.6	87.8	5.29	80 - 120	20	
Bromochloromethane	ND	20.0	20.5	103	20.0	19.3	96.7	5.90	65 - 130	20	
Bromodichloromethane	ND	20.0	20.1	101	20.0	19.2	95.9	4.71	80 - 131	20	
Bromoform	ND	20.0	21.0	105	20.0	20.6	103	1.87	70 - 130	20	
Bromomethane	ND	20.0	27.3	136	20.0	24.5	122	10.7	30 - 145	20	
Carbon disulfide	ND	20.0	19.0	94.8	20.0	17.8	89	6.31	58 - 128	20	
Carbon tetrachloride	ND	20.0	21.5	107	20.0	20.2	101	6.30	65 - 140	20	
Chlorobenzene	ND	20.0	20.9	105	20.0	19.6	98.2	6.29	80 - 120	20	
Chloroethane	ND	20.0	17.5	87.7	20.0	20.9	104	17.3	60 - 135	20	
Chloroform	ND	20.0	21.3	106	20.0	20.0	100	6.03	80 - 125	20	
Chloromethane	ND	20.0	16.5	82.4	20.0	15.7	78.4	4.94	40 - 125	20	
cis-1,2-Dichloroethene	ND	20.0	20.5	103	20.0	19.5	97.6	4.98	70 - 125	20	

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14101762 Cal ID: HPMS17 03-OCT-14 Worknum: WG498613

Instrument ID: HPMS17 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14101762-11 File ID: 17M009033 Dil: 1 Method: 5035A

Sample ID: L14101762-12 MS File ID: 17M009017 Dil: 1 Matrix: 8260B

Sample ID: L14101762-13 MSD File ID: 17M009018 Dil: 1 Units: Water

ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	21.0	105	20.0	19.9	99.5	5.48	70 - 130	20	
Chlorodibromomethane	ND	20.0	20.6	103	20.0	19.6	98.2	4.83	60 - 135	20	
Dibromomethane	ND	20.0	21.1	106	20.0	20.0	99.9	5.50	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	25.8	129	20.0	24.3	122	6.02	50 - 160	20	
Ethylbenzene	ND	20.0	20.3	101	20.0	18.9	94.5	7.04	80 - 122	20	
Hexachlorobutadiene	ND	20.0	17.0	85.2	20.0	15.9	79.5	6.89	72 - 132	20	
Isopropylbenzene	ND	20.0	21.1	105	20.0	19.7	98.7	6.57	80 - 122	20	
m-,p-Xylene	ND	40.0	41.9	105	40.0	39.1	97.9	6.71	80 - 122	20	
Methylene chloride	ND	20.0	19.6	98	20.0	18.7	93.3	4.94	80 - 123	20	
n-Butylbenzene	ND	20.0	18.4	91.8	20.0	17.2	85.8	6.74	80 - 131	20	
n-Propylbenzene	ND	20.0	18.3	91.6	20.0	17.1	85.3	7.15	80 - 129	20	
Naphthalene	ND	20.0	14.4	72	20.0	13.9	69.7	3.25	59 - 149	20	
o-Xylene	ND	20.0	20.8	104	20.0	19.8	98.8	5.10	80 - 122	20	
p-Isopropyltoluene	ND	20.0	18.2	91	20.0	16.9	84.5	7.46	80 - 122	20	
sec-Butylbenzene	ND	20.0	18.2	91.1	20.0	17.0	85.1	6.76	80 - 127	20	
Styrene	ND	20.0	20.5	102	20.0	19.4	97.1	5.24	80 - 123	20	
tert-Butylbenzene	ND	20.0	18.3	91.4	20.0	17.0	85	7.26	80 - 126	20	
Tetrachloroethene	ND	20.0	21.3	107	20.0	19.9	99.5	6.91	80 - 124	20	
Toluene	ND	20.0	19.8	99.2	20.0	18.5	92.6	6.94	80 - 124	20	
trans-1,2-Dichloroethene	ND	20.0	20.2	101	20.0	18.8	93.8	7.21	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	19.6	98.2	20.0	18.8	94	4.33	80 - 130	20	
Trichloroethene	ND	20.0	21.1	106	20.0	20.0	100	5.46	80 - 122	20	
Trichlorofluoromethane	ND	20.0	23.5	118	20.0	22.0	110	6.81	62 - 151	20	
Vinyl acetate	ND	20.0	36.2	181	20.0	34.4	172	5.13	10 - 190	20	
Vinyl chloride	ND	20.0	18.8	94.1	20.0	17.7	88.4	6.30	50 - 170	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14101762 Cal ID: HPMS8- 03-OCT-14 Worknum: WG498711

Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/

Parent ID: L14101762-24 File ID: 8M400985 Dil: 1 Method: 5035A

Sample ID: L14101762-25 MS File ID: 8M400968 Dil: 1 Matrix: 8260B

Sample ID: L14101762-26 MSD File ID: 8M400969 Dil: 1 Units: Water ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,1,1,2-Tetrachloroethane	ND	20.0	16.9	84.7	20.0	17.5	87.4	3.06	80 - 130	20	
1,1,1-Trichloroethane	ND	20.0	19.1	95.3	20.0	19.8	98.9	3.73	80 - 134	20	
1,1,2,2-Tetrachloroethane	ND	20.0	16.6	83.2	20.0	17.2	86.1	3.36	79 - 125	20	
1,1,2-Trichloroethane	ND	20.0	17.6	88.1	20.0	18.1	90.3	2.45	80 - 125	20	
1,1-Dichloroethane	4.17	20.0	22.3	90.6	20.0	23.2	95.3	4.15	80 - 125	20	
1,1-Dichloroethene	40.1	20.0	43.6	17.7	20.0	47.2	35.7	7.94	80 - 132	20	*
1,1-Dichloropropene	ND	20.0	18.2	91	20.0	19.0	95	4.23	75 - 130	20	
1,2,3-Trichlorobenzene	ND	20.0	20.2	101	20.0	21.6	108	6.46	55 - 140	20	
1,2,3-Trichloropropane	ND	20.0	16.6	82.9	20.0	17.2	86	3.66	75 - 125	20	
1,2,4-Trichlorobenzene	ND	20.0	17.8	89	20.0	18.7	93.7	5.18	65 - 135	20	
1,2,4-Trimethylbenzene	ND	20.0	15.7	78.5	20.0	16.7	83.5	6.07	80 - 125	20	*
1,2-Dibromo-3-chloropropane	ND	20.0	16.3	81.5	20.0	17.0	85.2	4.45	50 - 130	20	
1,2-Dibromoethane	ND	20.0	16.9	84.7	20.0	17.7	88.7	4.61	80 - 129	20	
1,2-Dichlorobenzene	ND	20.0	17.5	87.5	20.0	18.3	91.3	4.26	80 - 125	20	
1,2-Dichloroethane	0.357	20.0	19.8	97.1	20.0	19.8	97.1	0.0246	80 - 129	20	
1,2-Dichloropropane	ND	20.0	19.4	96.9	20.0	20.2	101	4.24	80 - 120	20	
1,3,5-Trimethylbenzene	ND	20.0	16.2	81.1	20.0	17.3	86.6	6.56	80 - 127	20	
1,3-Dichlorobenzene	ND	20.0	17.5	87.3	20.0	18.2	90.9	4.11	80 - 120	20	
1,3-Dichloropropane	ND	20.0	17.0	84.8	20.0	17.3	86.4	1.76	80 - 120	20	
1,4-Dichlorobenzene	ND	20.0	16.5	82.5	20.0	17.3	86.5	4.76	80 - 120	20	
2,2-Dichloropropane	ND	20.0	19.0	95.2	20.0	19.8	99.2	4.09	80 - 133	20	
2-Butanone	ND	20.0	21.9	109	20.0	21.2	106	3.22	30 - 170	20	
2-Chloroethyl vinyl ether	ND	20.0	0	0	20.0	0	0	NA	58 - 160	20	*#
2-Chlorotoluene	ND	20.0	17.5	87.5	20.0	18.7	93.7	6.92	80 - 127	20	
2-Hexanone	ND	20.0	17.8	89.1	20.0	17.3	86.3	3.12	55 - 130	20	
4-Chlorotoluene	ND	20.0	15.4	77.1	20.0	15.7	78.7	2.03	80 - 126	20	*
4-Methyl-2-pentanone	ND	20.0	19.6	97.9	20.0	18.8	93.8	4.30	64 - 140	20	
Acetone	ND	20.0	20.5	103	20.0	19.9	99.3	3.36	40 - 180	20	
Benzene	0.156	20.0	20.1	99.6	20.0	20.7	103	3.07	80 - 121	20	
Bromobenzene	ND	20.0	16.5	82.6	20.0	17.2	86.2	4.19	80 - 120	20	
Bromochloromethane	ND	20.0	21.0	105	20.0	21.0	105	0.145	65 - 130	20	
Bromodichloromethane	ND	20.0	20.4	102	20.0	21.2	106	3.82	80 - 131	20	
Bromoform	ND	20.0	16.6	82.9	20.0	16.7	83.5	0.780	70 - 130	20	
Bromomethane	ND	20.0	20.1	101	20.0	21.1	106	4.86	30 - 145	20	
Carbon disulfide	ND	20.0	16.5	82.5	20.0	18.2	90.8	9.52	58 - 128	20	
Carbon tetrachloride	ND	20.0	19.4	97	20.0	20.5	102	5.47	65 - 140	20	
Chlorobenzene	0.336	20.0	18.3	89.7	20.0	19.0	93.2	3.71	80 - 120	20	
Chloroethane	ND	20.0	18.4	92	20.0	18.8	94.1	2.22	60 - 135	20	
Chloroform	0.171	20.0	20.9	104	20.0	21.7	108	3.63	80 - 125	20	
Chloromethane	ND	20.0	16.9	84.6	20.0	17.4	86.8	2.57	40 - 125	20	
cis-1,2-Dichloroethene	10.4	20.0	28.2	88.9	20.0	29.2	94.2	3.63	70 - 125	20	

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Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L14101762 Cal ID: HPMS8 03-OCT-14 Worknum: WG498711
Instrument ID: HPMS8 Contract #: Prep Method: 5030B/5030C/
Parent ID: L14101762-24 File ID: 8M400985 Dil: 1 Method: 5035A
Sample ID: L14101762-25 MS File ID: 8M400968 Dil: 1 Matrix: 8260B
Sample ID: L14101762-26 MSD File ID: 8M400969 Dil: 1 Units: Water
ug/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
cis-1,3-Dichloropropene	ND	20.0	21.1	105	20.0	21.1	106	0.226	70 - 130	20	
Chlorodibromomethane	ND	20.0	18.0	89.8	20.0	18.5	92.6	3.06	60 - 135	20	
Dibromomethane	ND	20.0	19.8	99.1	20.0	19.8	98.8	0.325	75 - 125	20	
Dichlorodifluoromethane	ND	20.0	21.1	105	20.0	23.2	116	9.58	50 - 160	20	
Ethylbenzene	ND	20.0	16.2	81.1	20.0	16.8	84.1	3.71	80 - 122	20	
Hexachlorobutadiene	ND	20.0	13.7	68.3	20.0	14.8	74	7.90	72 - 132	20	*
Isopropylbenzene	ND	20.0	17.9	89.4	20.0	18.7	93.6	4.62	80 - 122	20	
m-,p-Xylene	ND	40.0	34.5	86.2	40.0	35.9	89.8	3.99	80 - 122	20	
Methylene chloride	ND	20.0	18.6	92.9	20.0	19.3	96.7	3.96	80 - 123	20	
n-Butylbenzene	ND	20.0	14.8	73.8	20.0	15.6	78.2	5.81	80 - 131	20	*
n-Propylbenzene	ND	20.0	15.4	77.2	20.0	16.4	81.8	5.80	80 - 129	20	*
Naphthalene	ND	20.0	22.7	113	20.0	23.4	117	3.35	59 - 149	20	
o-Xylene	ND	20.0	17.0	85.2	20.0	17.6	87.9	3.15	80 - 122	20	
p-Isopropyltoluene	ND	20.0	15.1	75.5	20.0	16.1	80.3	6.15	80 - 122	20	*
sec-Butylbenzene	ND	20.0	15.7	78.7	20.0	16.7	83.5	6.00	80 - 127	20	*
Styrene	ND	20.0	18.4	91.8	20.0	19.1	95.7	4.24	80 - 123	20	
tert-Butylbenzene	ND	20.0	14.6	73.1	20.0	15.2	75.9	3.76	80 - 126	20	*
Tetrachloroethene	26.8	20.0	38.2	57	20.0	39.5	63.3	3.24	80 - 124	20	*
Toluene	ND	20.0	17.2	85.9	20.0	17.9	89.7	4.42	80 - 124	20	
trans-1,2-Dichloroethene	0.339	20.0	17.8	87.1	20.0	19.0	93.2	6.61	80 - 127	20	
trans-1,3-Dichloropropene	ND	20.0	16.1	80.3	20.0	16.2	81.1	0.966	80 - 130	20	
Trichloroethene	78.3	20.0	82.9	22.8	20.0	83.4	25.2	0.586	80 - 122	20	*
Trichlorofluoromethane	ND	20.0	17.9	89.6	20.0	20.4	102	12.9	62 - 151	20	
Vinyl acetate	ND	20.0	36.3	181	20.0	34.1	171	6.05	10 - 190	20	
Vinyl chloride	3.06	20.0	18.3	76	20.0	19.3	81	5.29	50 - 170	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 3842680
Report generated 11/10/2014 16:18

METHOD BLANK SUMMARY

Login Number:	L14101762	Work Group:	WG499787
Blank File ID:	P2.110614.180515	Blank Sample ID:	WG499755-02
Prep Date:	11/06/14 12:34	Instrument ID:	PE-ICP2
Analyzed Date:	11/06/14 18:05	Method:	6010B
Analyst:	KHR		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG499755-03	P2.110614.180837	11/06/14 18:08	01
MW1-1	L14101762-01	P2.110614.181103	11/06/14 18:11	01
MW1-2	L14101762-02	P2.110614.181429	11/06/14 18:14	01
35BWW10	L14101762-03	P2.110614.181755	11/06/14 18:17	01
35BWW10D	L14101762-04	P2.110614.182118	11/06/14 18:21	01
35BWW08	L14101762-06	P2.110614.182444	11/06/14 18:24	01

Report Name: BLANK_SUMMARY
PDF File ID: 3856266
Report generated 11/12/2014 07:41

METHOD BLANK SUMMARY

Login Number: L14101762
Work Group: WG500061
Blank File ID: P2.111014.090121
Blank Sample ID: WG499907-02
Prep Date: 11/07/14 11:06
Instrument ID: PE-ICP2
Analyzed Date: 11/10/14 09:01
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG499907-03	P2.111014.090443	11/10/14 09:04	01
MW2-1	L14101762-08	P2.111014.090709	11/10/14 09:07	01
MW2-2	L14101762-09	P2.111014.091031	11/10/14 09:10	01
MW2-3	L14101762-10	P2.111014.091353	11/10/14 09:13	01
35BWW03	L14101762-11	P2.111014.091715	11/10/14 09:17	01
35BWW03MS	L14101762-12	P2.111014.092041	11/10/14 09:20	01
35BWW03MSD	L14101762-13	P2.111014.092309	11/10/14 09:23	01
FIELD BLANK 23OCTOBER14	L14101762-15	P2.111014.093717	11/10/14 09:37	01
MW3-1	L14101762-16	P2.111014.094038	11/10/14 09:40	01

Report Name: BLANK_SUMMARY
PDF File ID: 3856266
Report generated 11/12/2014 07:41

METHOD BLANK SUMMARY

Login Number: L14101762
Work Group: WG500295
Blank File ID: P2.111114.143510
Blank Sample ID: WG500051-02
Prep Date: 11/10/14 07:27
Instrument ID: PE-ICP2
Analyzed Date: 11/11/14 14:35
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG500051-03	P2.111114.143832	11/11/14 14:38	01
35BWW14	L14101762-24	P2.111114.144424	11/11/14 14:44	01
35BWW14MS	L14101762-25	P2.111114.144750	11/11/14 14:47	01
35BWW14MSD	L14101762-26	P2.111114.145016	11/11/14 14:50	01
MW4-3	L14101762-31	P2.111114.145243	11/11/14 14:52	01
35BWW17	L14101762-32	P2.111114.145606	11/11/14 14:56	01
35BWW09	L14101762-33	P2.111114.151104	11/11/14 15:11	01
FIELD BLANK 28OCTOBER14	L14101762-34	P2.111114.151430	11/11/14 15:14	01
35BWW20	L14101762-35	P2.111114.151751	11/11/14 15:17	01

Report Name: BLANK_SUMMARY
PDF File ID: 3856266
Report generated 11/12/2014 07:41

METHOD BLANK SUMMARY

Login Number: L14101762
Blank File ID: P2.111114.161228
Prep Date: 11/10/14 07:51
Analyzed Date: 11/11/14 16:12
Analyst: KHR

Work Group: WG500296
Blank Sample ID: WG500059-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG500059-03	P2.111114.161549	11/11/14 16:15	01
MW3-2	L14101762-17	P2.111114.170456	11/11/14 17:04	01
MW3-3	L14101762-18	P2.111114.170822	11/11/14 17:08	01
LHS-MW-58	L14101762-19	P2.111114.171145	11/11/14 17:11	01
35BWW04	L14101762-20	P2.111114.171508	11/11/14 17:15	01
35BWW05	L14101762-21	P2.111114.171830	11/11/14 17:18	01
35BWW06	L14101762-22	P2.111114.172739	11/11/14 17:27	01
35BWW08	L14101762-23	P2.111114.173005	11/11/14 17:30	01
MW4-1	L14101762-28	P2.111114.173331	11/11/14 17:33	01
MW4-1D	L14101762-29	P2.111114.173657	11/11/14 17:36	01
MW4-2	L14101762-30	P2.111114.174349	11/11/14 17:43	01

Report Name: BLANK_SUMMARY
PDF File ID: 3856266
Report generated 11/12/2014 07:41

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/06/14 12:34 Sample ID: WG499755-02
Instrument ID: PE-ICP2 Run Date: 11/06/14 18:05 Prep Method: 3015
File ID: P2.110614.180515 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG499787 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-06-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3856267
12-NOV-2014 07:41

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/07/14 11:06 Sample ID: WG499907-02
Instrument ID: PE-ICP2 Run Date: 11/10/14 09:01 Prep Method: 3015
File ID: P2.111014.090121 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG500061 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-10-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3856267
12-NOV-2014 07:41

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/10/14 07:27 Sample ID: WG500051-02
Instrument ID: PE-ICP2 Run Date: 11/11/14 14:35 Prep Method: 3015
File ID: P2.111114.143510 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG500295 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-11-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3856267
12-NOV-2014 07:41

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/10/14 07:51 Sample ID: WG500059-02
Instrument ID: PE-ICP2 Run Date: 11/11/14 16:12 Prep Method: 3015
File ID: P2.111114.161228 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG500296 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-11-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Strontium, Total	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3856267
12-NOV-2014 07:41

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/06/2014 Sample ID: WG499755-03
Instrument ID: PE-ICP2 Run Time: 18:08 Prep Method: 3015
File ID: P2.110614.180837 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG499787 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD67320 Cal ID: PE-ICP-06-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.38	102	85 - 115	
Calcium, Total	6.25	6.14	98.2	85 - 115	
Iron, Total	2.50	2.61	104	85 - 115	
Magnesium, Total	6.25	6.42	103	85 - 115	
Potassium, Total	31.3	32.6	104	85 - 115	
Sodium, Total	31.3	33.3	107	85 - 115	
Strontium, Total	0.625	0.649	104	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3856268
Report generated: 11/12/2014 07:41

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/10/2014 Sample ID: WG499907-03
Instrument ID: PE-ICP2 Run Time: 09:04 Prep Method: 3015
File ID: P2.111014.090443 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG500061 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD67320 Cal ID: PE-ICP-10-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	5.93	95.0	85 - 115	
Calcium, Total	6.25	5.77	92.3	85 - 115	
Iron, Total	2.50	2.41	96.5	85 - 115	
Magnesium, Total	6.25	5.89	94.3	85 - 115	
Potassium, Total	31.3	30.6	97.9	85 - 115	
Sodium, Total	31.3	31.1	99.6	85 - 115	
Strontium, Total	0.625	0.609	97.5	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3856268
Report generated: 11/12/2014 07:41

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/11/2014 Sample ID: WG500051-03
Instrument ID: PE-ICP2 Run Time: 14:38 Prep Method: 3015
File ID: P2.111114.143832 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG500295 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD67320 Cal ID: PE-ICP-11-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.12	97.8	85 - 115	
Calcium, Total	6.25	6.13	98.1	85 - 115	
Iron, Total	2.50	2.55	102	85 - 115	
Magnesium, Total	6.25	6.29	101	85 - 115	
Potassium, Total	31.3	32.5	104	85 - 115	
Sodium, Total	31.3	32.5	104	85 - 115	
Strontium, Total	0.625	0.647	103	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3856268
Report generated: 11/12/2014 07:41

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/11/2014 Sample ID: WG500059-03
Instrument ID: PE-ICP2 Run Time: 16:15 Prep Method: 3015
File ID: P2.111114.161549 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG500296 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD67320 Cal ID: PE-ICP-11-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.07	97.1	85 - 115	
Calcium, Total	6.25	6.37	102	85 - 115	
Iron, Total	2.50	2.53	101	85 - 115	
Magnesium, Total	6.25	6.23	99.7	85 - 115	
Potassium, Total	31.3	32.3	103	85 - 115	
Sodium, Total	31.3	32.4	104	85 - 115	
Strontium, Total	0.625	0.642	103	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 3856268
Report generated: 11/12/2014 07:41

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14101762 Cal ID: PE-ICP2- 10-NOV-14 Worknum:WG500061

Instrument ID:PE-ICP2 Contract #: Prep Method:3015

Parent ID:L14101762-11 File ID:P2.111014.091715 Dil:1 Method:6010B

Sample ID:L14101762-12 MS File ID:P2.111014.092041 Dil:1 Matrix:Water

Sample ID:L14101762-13 MSD File ID:P2.111014.092309 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	6.29	101	6.25	6.07	97.1	3.56	80 - 120	20	
Calcium, Total	9.77	6.25	16.7	110	6.25	16.1	101	3.54	80 - 120	20	
Iron, Total	0.0510	2.50	2.67	105	2.50	2.54	99.5	4.83	80 - 120	20	
Magnesium, Total	4.13	6.25	10.7	104	6.25	10.2	97.4	4.25	80 - 120	20	
Potassium, Total	6.09	31.3	37.9	102	31.3	37.2	99.6	1.79	80 - 120	20	
Sodium, Total	159	31.3	186	87.5	31.3	183	78.6	1.49	80 - 120	20	*
Strontium, Total	0.708	0.625	1.34	101	0.625	1.30	94.9	3.02	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3860008

Report generated 11/12/2014 07:13

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14101762 Cal ID:PE-ICP2- 11-NOV-14 Worknum:WG500295

Instrument ID:PE-ICP2 Contract #: Prep Method:3015

Parent ID:L14101762-24 File ID:P2.111114.144424 Dil:1 Method:6010B

Sample ID:L14101762-25 MS File ID:P2.111114.144750 Dil:1 Matrix:Water

Sample ID:L14101762-26 MSD File ID:P2.111114.145016 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	6.01	96.1	6.25	6.19	99.1	3.07	80 - 120	20	
Calcium, Total	14.7	6.25	21.0	102	6.25	21.4	108	1.80	80 - 120	20	
Iron, Total	0.0812	2.50	2.60	101	2.50	2.70	105	3.95	80 - 120	20	
Magnesium, Total	7.31	6.25	13.8	104	6.25	14.2	110	2.70	80 - 120	20	
Potassium, Total	0.773	31.3	32.1	100	31.3	32.7	102	1.69	80 - 120	20	
Sodium, Total	88.6	31.3	117	91.7	31.3	120	100	2.25	80 - 120	20	
Strontium, Total	0.493	0.625	1.12	99.5	0.625	1.14	103	2.21	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3860008

Report generated 11/12/2014 07:13

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L14101762 Cal ID:PE-ICP2- Worknum:WG499787
Instrument ID:PE-ICP2 Contract #: Method:6010B
Parent ID:WG499755-01 File ID:P2.110614.182710 Dil:1 Matrix:WATER
Sample ID:WG499755-04 MS File ID:P2.110614.184215 Dil:1 Units:mg/L
Sample ID:WG499755-05 MSD File ID:P2.110614.184442 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	6.00	96.0	6.25	6.51	104	8.22	80 - 120	20	
Calcium, Total	68.6	6.25	78.0	150	6.25	81.5	206	4.38	80 - 120	20	*
Iron, Total	ND	2.50	2.47	98.8	2.50	2.64	106	6.70	80 - 120	20	
Magnesium, Total	8.04	6.25	13.4	85.3	6.25	14.5	103	8.07	80 - 120	20	
Potassium, Total	0.868	31.3	32.2	100	31.3	33.1	103	2.69	80 - 120	20	
Sodium, Total	10.9	31.3	42.0	99.5	31.3	43.3	104	3.09	80 - 120	20	
Strontium, Total	0.298	0.625	0.890	94.7	0.625	0.921	99.6	3.38	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3856269
Report generated 11/12/2014 07:41

Loginnum:L14101762 Cal ID: PE-ICP2- Worknum:WG500296
Instrument ID:PE-ICP2 Contract #: Method:6010B
Parent ID:WG500059-01 File ID:P2.111114.161815 Dil:1 Matrix:WATER
Sample ID:WG500059-04 MS File ID:P2.111114.162137 Dil:1 Units:mg/L
Sample ID:WG500059-05 MSD File ID:P2.111114.162403 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.816	6.25	6.73	94.7	6.25	6.80	95.8	1.01	80 - 120	20	
Calcium, Total	0.528	6.25	6.28	92.0	6.25	6.39	93.8	1.85	80 - 120	20	
Iron, Total	2.46	2.50	4.13	66.9	2.50	5.09	105	20.8	80 - 120	20	*#
Magnesium, Total	0.485	6.25	6.50	96.2	6.25	6.37	94.2	1.94	80 - 120	20	
Potassium, Total	0.876	31.3	32.6	102	31.3	31.9	99.4	2.14	80 - 120	20	
Sodium, Total	2.04	31.3	34.4	104	31.3	33.8	102	1.99	80 - 120	20	
Strontium, Total	ND	0.625	0.625	100	0.625	0.606	97.0	3.06	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3856269
Report generated 11/12/2014 07:41

METHOD BLANK SUMMARY

Login Number: L14101762
Work Group: WG499526
Blank File ID: NI.110514.152542
Blank Sample ID: WG499505-02
Prep Date: 11/05/14 11:15
Instrument ID: ICP-MS2
Analyzed Date: 11/05/14 15:25
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG499505-03	NI.110514.153159	11/05/14 15:31	01
35BWW14	L14101762-24	NI.110514.153508	11/05/14 15:35	01
35BWW14MS	L14101762-25	NI.110514.153817	11/05/14 15:38	01
35BWW14MSD	L14101762-26	NI.110514.154126	11/05/14 15:41	01
35BWW08	L14101762-23	NI.110514.160710	11/05/14 16:07	01
MW4-1	L14101762-28	NI.110514.161019	11/05/14 16:10	01
MW4-1D	L14101762-29	NI.110514.162051	11/05/14 16:20	01
MW4-2	L14101762-30	NI.110514.162400	11/05/14 16:24	01
LCS	WG499505-03	NI.110614.160151	11/06/14 16:01	02
35BWW08	L14101762-23	NI.110614.160500	11/06/14 16:05	02
35BWW14	L14101762-24	NI.110614.161735	11/06/14 16:17	02
35BWW14MS	L14101762-25	NI.110614.162044	11/06/14 16:20	02
35BWW14MSD	L14101762-26	NI.110614.162353	11/06/14 16:23	02
MW4-1	L14101762-28	NI.110614.163324	11/06/14 16:33	02
MW4-1	L14101762-28	NI.110614.163633	11/06/14 16:36	DL01
MW4-1D	L14101762-29	NI.110614.163942	11/06/14 16:39	02
MW4-1D	L14101762-29	NI.110614.164250	11/06/14 16:42	DL01
MW4-2	L14101762-30	NI.110614.164559	11/06/14 16:45	02

Report Name: BLANK_SUMMARY
PDF File ID: 3853547
Report generated 11/12/2014 15:00

METHOD BLANK SUMMARY

Login Number: L14101762
Work Group: WG499526
Blank File ID: NI.110614.155533
Blank Sample ID: WG499505-02
Prep Date: 11/05/14 11:15
Instrument ID: ICP-MS2
Analyzed Date: 11/06/14 15:55
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG499505-03	NI.110514.153159	11/05/14 15:31	01
35BWW14	L14101762-24	NI.110514.153508	11/05/14 15:35	01
35BWW14MS	L14101762-25	NI.110514.153817	11/05/14 15:38	01
35BWW14MSD	L14101762-26	NI.110514.154126	11/05/14 15:41	01
35BWW08	L14101762-23	NI.110514.160710	11/05/14 16:07	01
MW4-1	L14101762-28	NI.110514.161019	11/05/14 16:10	01
MW4-1D	L14101762-29	NI.110514.162051	11/05/14 16:20	01
MW4-2	L14101762-30	NI.110514.162400	11/05/14 16:24	01
LCS	WG499505-03	NI.110614.160151	11/06/14 16:01	02
35BWW08	L14101762-23	NI.110614.160500	11/06/14 16:05	02
35BWW14	L14101762-24	NI.110614.161735	11/06/14 16:17	02
35BWW14MS	L14101762-25	NI.110614.162044	11/06/14 16:20	02
35BWW14MSD	L14101762-26	NI.110614.162353	11/06/14 16:23	02
MW4-1	L14101762-28	NI.110614.163324	11/06/14 16:33	02
MW4-1	L14101762-28	NI.110614.163633	11/06/14 16:36	DL01
MW4-1D	L14101762-29	NI.110614.163942	11/06/14 16:39	02
MW4-1D	L14101762-29	NI.110614.164250	11/06/14 16:42	DL01
MW4-2	L14101762-30	NI.110614.164559	11/06/14 16:45	02

Report Name: BLANK_SUMMARY
PDF File ID: 3853547
Report generated 11/12/2014 15:00

METHOD BLANK SUMMARY

Login Number: L14101762
Blank File ID: NI.111014.151829
Prep Date: 11/08/14 08:46
Analyzed Date: 11/10/14 15:18
Analyst: JYH

Work Group: WG500177
Blank Sample ID: WG500012-02
Instrument ID: ICP-MS2
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG500012-03	NI.111014.152138	11/10/14 15:21	01
MW1-1	L14101762-01	NI.111014.152446	11/10/14 15:24	01
MW1-2	L14101762-02	NI.111014.152755	11/10/14 15:27	01
35BWW10	L14101762-03	NI.111014.153104	11/10/14 15:31	01
35BWW10D	L14101762-04	NI.111014.153413	11/10/14 15:34	01
MW2-1	L14101762-08	NI.111014.155619	11/10/14 15:56	01
MW2-2	L14101762-09	NI.111014.155928	11/10/14 15:59	01
MW2-3	L14101762-10	NI.111014.160237	11/10/14 16:02	01
35BWW03	L14101762-11	NI.111014.160545	11/10/14 16:05	01
35BWW03MS	L14101762-12	NI.111014.160854	11/10/14 16:08	01
35BWW03MSD	L14101762-13	NI.111014.161203	11/10/14 16:12	01
FIELD BLANK 23OCTOBER14	L14101762-15	NI.111014.161512	11/10/14 16:15	01
MW3-1	L14101762-16	NI.111014.161821	11/10/14 16:18	01
MW3-2	L14101762-17	NI.111014.162130	11/10/14 16:21	01
MW3-3	L14101762-18	NI.111014.162439	11/10/14 16:24	01
LHS-MW-58	L14101762-19	NI.111014.163409	11/10/14 16:34	01
35BWW04	L14101762-20	NI.111014.163718	11/10/14 16:37	01
35BWW05	L14101762-21	NI.111014.164027	11/10/14 16:40	01
35BWW06	L14101762-22	NI.111014.164336	11/10/14 16:43	01
MW4-3	L14101762-31	NI.111014.164645	11/10/14 16:46	01
35BWW17	L14101762-32	NI.111014.164954	11/10/14 16:49	01
35BWW09	L14101762-33	NI.111014.165302	11/10/14 16:53	01
35BWW08	L14101762-06	NI.111114.140450	11/11/14 14:04	02

Report Name: BLANK_SUMMARY
PDF File ID: 3853547
Report generated 11/12/2014 15:00

METHOD BLANK SUMMARY

Login Number: L14101762
Work Group: WG500181
Blank File ID: NI.111114.145038
Blank Sample ID: WG500065-03
Prep Date: 11/10/14 09:18
Instrument ID: ICP-MS2
Analyzed Date: 11/11/14 14:50
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG500065-04	NI.111114.145347	11/11/14 14:53	01
FIELD BLANK 28OCTOBER14	L14101762-34	NI.111114.145656	11/11/14 14:56	01
35BWW20	L14101762-35	NI.111114.150005	11/11/14 15:00	01
DUP	WG500065-05	NI.111114.153542	11/11/14 15:35	01
LCS	WG500065-04	NI.111214.135654	11/12/14 13:56	02
FIELD BLANK 28OCTOBER14	L14101762-34	NI.111214.140928	11/12/14 14:09	02
35BWW20	L14101762-35	NI.111214.141237	11/12/14 14:12	02

Report Name: BLANK_SUMMARY
PDF File ID: 3853547
Report generated 11/12/2014 15:00

METHOD BLANK SUMMARY

Login Number: L14101762
Work Group: WG500181
Blank File ID: NI.111214.135346
Blank Sample ID: WG500065-03
Prep Date: 11/10/14 09:18
Instrument ID: ICP-MS2
Analyzed Date: 11/12/14 13:53
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG500065-04	NI.111114.145347	11/11/14 14:53	01
FIELD BLANK 28OCTOBER14	L14101762-34	NI.111114.145656	11/11/14 14:56	01
35BWW20	L14101762-35	NI.111114.150005	11/11/14 15:00	01
DUP	WG500065-05	NI.111114.153542	11/11/14 15:35	01
LCS	WG500065-04	NI.111214.135654	11/12/14 13:56	02
FIELD BLANK 28OCTOBER14	L14101762-34	NI.111214.140928	11/12/14 14:09	02
35BWW20	L14101762-35	NI.111214.141237	11/12/14 14:12	02

Report Name: BLANK_SUMMARY
PDF File ID: 3853547
Report generated 11/12/2014 15:00

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/05/14 11:15 Sample ID: WG499505-02
Instrument ID: ICP-MS2 Run Date: 11/05/14 15:25 Prep Method: 3015
File ID: NI.110514.152542 Analyst: JYH Method: 6020
Workgroup (AAB#): WG499526 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-05-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3853548
12-NOV-2014 15:00

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/05/14 11:15 Sample ID: WG499505-02
Instrument ID: ICP-MS2 Run Date: 11/06/14 15:55 Prep Method: 3015
File ID: NI.110614.155533 Analyst: JYH Method: 6020
Workgroup (AAB#): WG499526 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-06-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3853548
12-NOV-2014 15:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/08/14 08:46 Sample ID: WG500012-02
Instrument ID: ICP-MS2 Run Date: 11/10/14 15:18 Prep Method: 3015
File ID: NI.111014.151829 Analyst: JYH Method: 6020
Workgroup (AAB#): WG500177 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-10-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00103	1	J
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3853548
12-NOV-2014 15:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/10/14 09:18 Sample ID: WG500065-03
Instrument ID: ICP-MS2 Run Date: 11/11/14 14:50 Prep Method: 3015
File ID: NI.111114.145038 Analyst: JYH Method: 6020
Workgroup (AAB#): WG500181 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-11-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Thallium, Total	0.000100	0.000200	0.000100	1	U
Vanadium, Total	0.000500	0.00100	0.000500	1	U
Zinc, Total	0.0125	0.0250	0.0125	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3853548
12-NOV-2014 15:00

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L14101762 Prep Date: 11/10/14 09:18 Sample ID: WG500065-03
Instrument ID: ICP-MS2 Run Date: 11/12/14 13:53 Prep Method: 3015
File ID: NI.111214.135346 Analyst: JYH Method: 6020
Workgroup (AAB#): WG500181 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-12-NOV-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3853548
12-NOV-2014 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/05/2014 Sample ID: WG499505-03
Instrument ID: ICP-MS2 Run Time: 15:31 Prep Method: 3015
File ID: NI.110514.153159 Analyst: JYH Method: 6020
Workgroup (AAB#): WG499526 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65967 Cal ID: ICP-MS-05-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0696	111	80 - 120	
Barium, Total	0.0625	0.0671	107	80 - 120	
Cadmium, Total	0.0625	0.0655	105	80 - 120	
Chromium, Total	0.0625	0.0697	111	80 - 120	
Copper, Total	0.0625	0.0691	111	80 - 120	
Lead, Total	0.0625	0.0678	109	80 - 120	
Manganese, Total	0.0625	0.0698	112	80 - 120	
Nickel, Total	0.0625	0.0650	104	80 - 120	
Selenium, Total	0.0625	0.0674	108	80 - 120	
Thallium, Total	0.0625	0.0662	106	80 - 120	
Vanadium, Total	0.0625	0.0684	109	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3853549
Report generated: 11/12/2014 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/06/2014 Sample ID: WG499505-03
Instrument ID: ICP-MS2 Run Time: 16:01 Prep Method: 3015
File ID: NI.110614.160151 Analyst: JYH Method: 6020
Workgroup (AAB#): WG499526 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65967 Cal ID: ICP-MS-06-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Zinc, Total	0.0625	0.0730	117	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3853549
Report generated: 11/12/2014 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/10/2014 Sample ID: WG500012-03
Instrument ID: ICP-MS2 Run Time: 15:21 Prep Method: 3015
File ID: NI.111014.152138 Analyst: JYH Method: 6020
Workgroup (AAB#): WG500177 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65967 Cal ID: ICP-MS-10-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0626	100	80 - 120	
Barium, Total	0.0625	0.0614	98.2	80 - 120	
Cadmium, Total	0.0625	0.0607	97.1	80 - 120	
Chromium, Total	0.0625	0.0636	102	80 - 120	
Copper, Total	0.0625	0.0645	103	80 - 120	
Lead, Total	0.0625	0.0615	98.4	80 - 120	
Manganese, Total	0.0625	0.0634	101	80 - 120	
Nickel, Total	0.0625	0.0638	102	80 - 120	
Selenium, Total	0.0625	0.0624	99.9	80 - 120	
Thallium, Total	0.0625	0.0616	98.6	80 - 120	
Vanadium, Total	0.0625	0.0625	100	80 - 120	
Zinc, Total	0.0625	0.0671	107	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3853549
Report generated: 11/12/2014 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/11/2014 Sample ID: WG500065-04
Instrument ID: ICP-MS2 Run Time: 14:53 Prep Method: 3015
File ID: NI.111114.145347 Analyst: JYH Method: 6020
Workgroup (AAB#): WG500181 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65967 Cal ID: ICP-MS-11-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Barium, Total	0.0625	0.0680	109	80 - 120	
Cadmium, Total	0.0625	0.0671	107	80 - 120	
Chromium, Total	0.0625	0.0686	110	80 - 120	
Copper, Total	0.0625	0.0689	110	80 - 120	
Lead, Total	0.0625	0.0678	108	80 - 120	
Manganese, Total	0.0625	0.0687	110	80 - 120	
Nickel, Total	0.0625	0.0671	107	80 - 120	
Selenium, Total	0.0625	0.0664	106	80 - 120	
Thallium, Total	0.0625	0.0665	106	80 - 120	
Vanadium, Total	0.0625	0.0668	107	80 - 120	
Zinc, Total	0.0625	0.0732	117	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3853549
Report generated: 11/12/2014 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14101762 Run Date: 11/12/2014 Sample ID: WG500065-04
Instrument ID: ICP-MS2 Run Time: 13:56 Prep Method: 3015
File ID: NI.111214.135654 Analyst: JYH Method: 6020
Workgroup (AAB#): WG500181 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD65967 Cal ID: ICP-MS-12-NOV-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0624	99.9	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3853549
Report generated: 11/12/2014 15:00

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14101762 Cal ID: ICP-MS2- 05-NOV-14 Worknum:WG499526

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L14101762-24 File ID:NI.110514.153508 Dil:1 Method:6020

Sample ID:L14101762-25 MS File ID:NI.110514.153817 Dil:1 Matrix:Water

Sample ID:L14101762-26 MSD File ID:NI.110514.154126 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0642	103	0.0625	0.0678	109	5.49	75 - 125	20	
Barium, Total	0.0470	0.0625	0.109	99.7	0.0625	0.115	109	5.05	75 - 125	20	
Cadmium, Total	ND	0.0625	0.0635	102	0.0625	0.0675	108	6.10	75 - 125	20	
Chromium, Total	ND	0.0625	0.0666	107	0.0625	0.0700	112	4.99	75 - 125	20	
Copper, Total	ND	0.0625	0.0655	105	0.0625	0.0683	109	4.24	75 - 125	20	
Lead, Total	ND	0.0625	0.0650	104	0.0625	0.0674	108	3.68	75 - 125	20	
Manganese, Total	0.0250	0.0625	0.0928	108	0.0625	0.0952	112	2.56	75 - 125	20	
Nickel, Total	ND	0.0625	0.0624	99.8	0.0625	0.0651	104	4.24	75 - 125	20	
Selenium, Total	0.000954	0.0625	0.0662	104	0.0625	0.0690	109	4.20	75 - 125	20	
Thallium, Total	ND	0.0625	0.0638	102	0.0625	0.0677	108	5.98	75 - 125	20	
Vanadium, Total	0.000527	0.0625	0.0665	106	0.0625	0.0707	112	6.06	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3853550

Report generated 11/12/2014 09:54

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14101762 Cal ID:ICP-MS2- 06-NOV-14 Worknum:WG499526

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L14101762-24 File ID:NI.110614.161735 Dil:1 Method:6020

Sample ID:L14101762-25 MS File ID:NI.110614.162044 Dil:1 Matrix:Water

Sample ID:L14101762-26 MSD File ID:NI.110614.162353 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Zinc, Total	ND	0.0625	0.0709	113	0.0625	0.0790	126	10.8	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3853550

Report generated 11/12/2014 09:54

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L14101762 Cal ID: ICP-MS2- 10-NOV-14 Worknum:WG500177

Instrument ID:ICP-MS2 Contract #: Prep Method:3015

Parent ID:L14101762-11 File ID:NI.111014.160545 Dil:1 Method:6020

Sample ID:L14101762-12 MS File ID:NI.111014.160854 Dil:1 Matrix:Water

Sample ID:L14101762-13 MSD File ID:NI.111014.161203 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	ND	0.0625	0.0638	102	0.0625	0.0643	103	0.764	75 - 125	20	
Barium, Total	0.101	0.0625	0.161	97	0.0625	0.169	110	4.76	75 - 125	20	
Cadmium, Total	ND	0.0625	0.0625	100	0.0625	0.0626	100	0.0707	75 - 125	20	
Chromium, Total	0.00373	0.0625	0.0641	96.6	0.0625	0.0651	98.2	1.61	75 - 125	20	
Copper, Total	ND	0.0625	0.0630	101	0.0625	0.0640	102	1.53	75 - 125	20	
Lead, Total	ND	0.0625	0.0647	103	0.0625	0.0647	104	0.128	75 - 125	20	
Manganese, Total	0.00977	0.0625	0.0731	101	0.0625	0.0783	110	6.90	75 - 125	20	
Nickel, Total	ND	0.0625	0.0624	99.9	0.0625	0.0623	99.7	0.195	75 - 125	20	
Selenium, Total	0.00222	0.0625	0.0669	103	0.0625	0.0683	106	2.07	75 - 125	20	
Thallium, Total	0.000127	0.0625	0.0641	102	0.0625	0.0639	102	0.354	75 - 125	20	
Vanadium, Total	ND	0.0625	0.0640	102	0.0625	0.0646	103	0.915	75 - 125	20	
Zinc, Total	ND	0.0625	0.0697	112	0.0625	0.0703	112	0.754	75 - 125	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 3853550

Report generated 11/12/2014 09:54

Loginnum:L14101762 Cal ID:ICP-MS2- Worknum:WG500181
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:WG500065-02 File ID:NI.111114.155744 Dil:1 Matrix:WATER
Sample ID:WG500065-06 MS File ID:NI.111114.160715 Dil:1 Units:mg/L
Sample ID:WG500065-07 MSD File ID:NI.111114.161024 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Cadmium	ND	0.0625	0.0653	104	0.0625	0.0663	106	1.50	75 - 125	20	
Chromium	0.0105	0.0625	0.0769	106	0.0625	0.0804	112	4.54	75 - 125	20	
Copper	0.00818	0.0625	0.0740	105	0.0625	0.0753	107	1.63	75 - 125	20	
Lead	0.00153	0.0625	0.0668	104	0.0625	0.0676	106	1.11	75 - 125	20	
Manganese, Total	0.0885	0.0625	0.140	83.1	0.0625	0.152	102	7.98	75 - 125	20	
Nickel	0.0100	0.0625	0.0697	95.5	0.0625	0.0704	96.6	0.981	75 - 125	20	
Selenium	0.00143	0.0625	0.0673	105	0.0625	0.0679	106	0.961	75 - 125	20	
Thallium	0.000144	0.0625	0.0655	105	0.0625	0.0667	106	1.82	75 - 125	20	
Vanadium	0.0185	0.0625	0.0848	106	0.0625	0.0866	109	2.14	75 - 125	20	
Zinc	0.0168	0.0625	0.0776	97.3	0.0625	0.0801	101	3.14	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3867862
Report generated 11/13/2014 16:45

Loginnum:L14101762 Cal ID:ICP-MS2- Worknum:WG500181
Instrument ID:ICP-MS2 Contract #: Method:6020
Parent ID:WG500065-02 File ID:NI.111214.140003 Dil:1 Matrix:WATER
Sample ID:WG500065-06 MS File ID:NI.111214.140311 Dil:1 Units:mg/L
Sample ID:WG500065-07 MSD File ID:NI.111214.140620 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony	ND	0.0625	0.0633	101	0.0625	0.0613	98.0	3.32	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3867862
Report generated 11/13/2014 16:45

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
November 13, 2014

001 - BIO-CHEM TESTING WVDEP 220	002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental	004 - MICROBAC PITTSBURGH
005 - ES LABORATORIES	006 - ALCOSAN LABORATORIES
007 - ALS LABORATORIES	008 - BENCHMARK LABORATORIES
010 - MICROBAC CHICAGOLAND	ADC - ANTHONY D. CANTER
ADG - APRIL D. GREENE	ALS - ADRIANE L. STEED
AWE - ANDREW W. ESSIG	AZH - AFTER HOURS
BJO - BRIAN J. OGDEN	BKT - BRENDAN TORRENCE
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN	CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES	CJR - COURTNEY J. REXROAD
CLC - CHRYS L. CRAWFORD	CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CSH - CHRIS S. HILL	DAK - DEAN A. KETELSEN
DCM - DAVID C. MERCKLE	DEV - DAVID E. VANDENBERG
DIH - DEANNA I. HESSON	DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE	DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON	ENY - EMILY N. YOAK
EPT - ETHAN P. TIDD	ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN	JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON	JDS - JARED D. SMITH
JJS - JOHN J. STE MARIE	JLL - JOHN L. LENT
JMW - JEANA M. WHITE	JTP - JOSHUA T. PEMBERTON
JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KAJ - KELLIE A. JOHNSON
KAT - KATHY A. TUCKER	KDW - KATHRYN D. WELCH
KEB - KATIE E. BARNES	KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON	KRB - KAELY R. BECKER
KRP - KATHY R. PARSONS	LEC - LAURA E. CARPENTER
LKN - LINDA K. NEDEFF	LLS - LARRY L. STEPHENS
LSB - LESLIE S. BUCINA	MBK - MORGAN B. KNOWLTON
MDA - MIKE D. ALBERTSON	MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING	MLB - MEGAN L. BACHE
MMB - MAREN M. BEERY	MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE	PRL - PAIGE R. LAMB
PSW - PEGGY S. WEBB	QX - QIN XU
RAH - ROY A. HALSTEAD	REK - BOB E. KYER
RLB - BOB BUCHANAN	RM - RAYMOND MALEKE
RNP - RICK N. PETTY	SAV - SARAH A. VANDENBERG
SDC - SHALYN D. CONLEY	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TB - TODD BOYLE
TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WRR - WESLEY R. RICHARDS	WTD - WADE T. DELONG
XXX - UNAVAILABLE OR SUBCONTRACT	

Microbac Laboratories Inc.
List of Valid Qualifiers
November 13, 2014

Qualkey: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
CT1	The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
FL	Free Liquid
H1	Sample analysis performed past holding time.
H1,CT1	Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guidelines for reque
I	Semiquantitative result (out of instrument calibration range)
J	Estimated value; the analyte concentration was less than the RL/LOQ.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL/MDL).
ND, B	Not detected at or above the reporting limit (RL). Analyte present in method blank.
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
ND,H1	Not detected; Sample analysis performed past holding time.
ND,H1,CT1	Not detected; Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guide
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
TNTC, B	Too numerous to count. Analyte present in method blank.
TNTC,CT1	Too numerous to count. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
TNTC,H1	Too numerous to count. Sample analysis performed past holding time.
U	Analyte was not detected. The concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 40380

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 3083.001/B66490

Sampler (print): CARL JOHNSON JR | Signature: Carl Johnson Jr

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	TOTAL Metals	TOTAL # (LAB USE)
MW 1-1		X	21 OCT 2014	0945	GW	4	S	3	1	
MW 1-2		X	21 OCT 2014	1140	GW	4	S	3	1	
35B WW10		X	21 OCT 2014	1345	GW	4	S	3	1	
35B WW10D		X	21 OCT 2014	1400	GW	4	S	3	1	
TRIP BLANK 21 OCTOBER 14		X	21 OCT 2014	—	TRIP BLANK	2	S	2		
35B WW08		X	21 OCT 2014	1540	GW	4	S	3	1	
TRIP Blank 22 October 2014		X	22 OCT 2014	—	GW	2	S	2		
MW-2-1		X	22 Oct 2014	0900	GW	4	S	3	1	
MW 2-2		X	22 Oct 2014	1100	GW	4	S	3	1	
MW 2-3		X	22 Oct 2014	1240	GW	4	S	3	1	
35B WW03		X	22 Oct 2014	1400	GW	4	S	3	1	
35B WW03 MS		X	22 Oct 2014	1410	GW	4	S	3	1	
35B WW03 MSD		X	22 Oct 2014	1420	GW	4	S	3	1	
TRIP Blank 23 October 2014		X	23 Oct 2014	—	TRIP BLANK	2	S	2		
Field Blank 23 October 2014		X	23 Oct 2014	0830	DI water	4	S	3	1	
MW 3-1		X	23 Oct 2014	1015	GW	4	S	3	1	
MW 3-2		X	23 Oct 2014	1240	GW	4	S	3	1	
MW 3-3		X	23 Oct 2014	1410	GW	4	S	3	1	
LHS-MW-58		X	23 Oct 2014	1515	GW	4	S	3	1	
35B WW04		X	24 Oct 2014	0905	GW	4	S	3	1	

Microbac OVD
Received: 10/29/2014 11:33
By: JOSHUA PEMBERTON 221000061447

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Carl Johnson Jr	28 Oct 14	1600	74				

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

COC No. A 40379

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: US ARMY ABERDEEN TEST CENTER

Project Contact: GENE FABIAN | Contact Phone #: 410-278-7421

Turn Around Requirements: STANDARD | Location: LHAAP

Project ID: 3083.001 / B66490

Sampler (print): CARL JOHNSON JR | Signature: Carl Johnson

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	Total Metals		TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
35B WW05		X	24 oct 14	1050	GW	4	S	3	1			
35B WW06		X	24 Oct 14	1150	GW	4	S	3	1			
35B WW08		X	24 Oct 14	1340	GW	4	S	3	1			
35B WW14		X	27 Oct 14	0900	GW	4	S	3	1			
35B WW14MS		X	27 Oct 14	0910	GW	4	S	3	1			
35B WW14MSD		X	27 Oct 14	0920	GW	4	S	3	1			
TRIP BLANK 27 October 2014		X	27 Oct 14	—	DI water (Trip Blank)	2	S	2				
MW4-1		X	27 Oct 14	1070	GW	4	S	3	1			
MW4-1D		X	27 Oct 14	1030	GW	4	S	3	1			
MW 4-2		X	27 Oct 14	1145	GW	4	S	3	1			
MW 4-3		X	27 Oct 14	1320	GW	4	S	3	1			
35B WW17		X	27 Oct 14	1500	GW	4	S	3	1			
35B WW09		X	28 Oct 14	0840	GW	4	S	3	1			
FIELD BLANK 28 October 2014		X	28 Oct 14	0830	DI water	4	S	3	1			
35B WW20		X	28 Oct 14	1015	GW	4	S	3	1			

Microbac OVD
Received: 10/29/2014 11:33
By: JOSHUA PEMBERTON 221000061447
Joshua Pemberton

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Carl Johnson	28 Oct 14	1600	SS				
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:	

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 2 of 2

00839076

NELAP Addendum - May 22, 2014

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)
Acetate (HPLC-UV)
Formate (HPLC-UV)
Acetaldehyde (HPLC-UV)
Propionaldehyde (HPLC-UV)
Fluoroborate (ISE)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam

Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
lsoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

APPENDIX E. WELL PLUGGING REPORTS

00839081

STATE OF TEXAS PLUGGING REPORT for Tracking #100222

Owner:	**USACE**	Owner Well #:	**1-1**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.5 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 3 bentonite** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839082

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100222**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839083

STATE OF TEXAS PLUGGING REPORT for Tracking #100223

Owner:	**USACE**	Owner Well #:	**1-2**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **No Data** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 3 bentonite** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100223**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839085

STATE OF TEXAS PLUGGING REPORT for Tracking #100224

Owner:	**USACE**	Owner Well #:	**1-3**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.9 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.9 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 3 bentonite** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100224**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839087

STATE OF TEXAS PLUGGING REPORT for Tracking #100225

Owner:	**USACE**	Owner Well #:	**1-4**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.10 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.10 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 3 bentonite** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839088

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100227**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839089

STATE OF TEXAS PLUGGING REPORT for Tracking #100226

Owner:	**USACE**	Owner Well #:	**1-5**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.10 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.10 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 3 bentonite** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839090

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100226**) on your written request.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839091

STATE OF TEXAS PLUGGING REPORT for Tracking #100227

Owner:	**USACE**	Owner Well #:	**1-6**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 3 bentonite** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839092

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100227**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839093

STATE OF TEXAS PLUGGING REPORT for Tracking #100228

Owner:	**USACE**	Owner Well #:	**1-7**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.8 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.8 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 3 bentonite** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839094

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100228**) on your written request.

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00839095

STATE OF TEXAS PLUGGING REPORT for Tracking #100229

Owner:	**USACE**	Owner Well #:	**1-8**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 3 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839096

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100229**) on your written request.

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00839097

STATE OF TEXAS PLUGGING REPORT for Tracking #100230

Owner:	**USACE**	Owner Well #:	**1-9**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.8 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.8 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100230**) on your written request.

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00839099

STATE OF TEXAS PLUGGING REPORT for Tracking #100231

Owner:	**USACE**	Owner Well #:	**1-10**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23.9 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.8 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839100

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100231**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839101

STATE OF TEXAS PLUGGING REPORT for Tracking #100232

Owner:	**USACE**	Owner Well #:	**1-11**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.11 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.8 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839102

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100232**) on your written request.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839103

STATE OF TEXAS PLUGGING REPORT for Tracking #100233

Owner:	**USACE**	Owner Well #:	**1-12**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 45" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.8 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839104

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100233**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839105

STATE OF TEXAS PLUGGING REPORT for Tracking #100234

Owner:	**USACE**	Owner Well #:	**1-13**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 45" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.5 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.6 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839106

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100234**) on your written request.

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(512) 463-7880

00839107

STATE OF TEXAS PLUGGING REPORT for Tracking #100235

Owner:	**USACE**	Owner Well #:	**1-14**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 45" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19.10 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.6 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839108

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100235**) on your written request.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839109

STATE OF TEXAS PLUGGING REPORT for Tracking #100236

Owner:	**USACE**	Owner Well #:	**1-15**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23.9 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.6 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839110

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100236**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839111

STATE OF TEXAS PLUGGING REPORT for Tracking #100237

Owner:	**USACE**	Owner Well #:	**1-16**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839112

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100237**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839113

STATE OF TEXAS PLUGGING REPORT for Tracking #100238

Owner:	**USACE**	Owner Well #:	**1-17**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/23/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.11 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.11 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839114

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100238**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839115

STATE OF TEXAS PLUGGING REPORT for Tracking #100239

Owner:	**USACE**	Owner Well #:	**2-1**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 15 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 15 ft to 10 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839116

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100239**) on your written request.

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P.O. Box 12157
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00839117

STATE OF TEXAS PLUGGING REPORT for Tracking #100240

Owner:	**USACE**	Owner Well #:	**2-2**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14.5 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14.5 ft to 10 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100240**) on your written request.

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00839119

STATE OF TEXAS PLUGGING REPORT for Tracking #100241

Owner:	**USACE**	Owner Well #:	**2-3**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.10 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.10 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100241**) on your written request.

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(512) 463-7880

00839121

STATE OF TEXAS PLUGGING REPORT for Tracking #100242

Owner:	**USACE**	Owner Well #:	**2-4**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14.9 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14.9 ft to 10 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839122

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100242**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839123

STATE OF TEXAS PLUGGING REPORT for Tracking #100243

Owner:	**USACE**	Owner Well #:	**2-5**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14.4 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14.9 ft to 10 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839124

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100243**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839125

STATE OF TEXAS PLUGGING REPORT for Tracking #100244

Owner:	**USACE**	Owner Well #:	**2-6**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.9 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14.9 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100244**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839127

STATE OF TEXAS PLUGGING REPORT for Tracking #100245

Owner:	**USACE**	Owner Well #:	**2-7**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18.5 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18.5 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839128

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100245**) on your written request.

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(512) 463-7880

00839129

STATE OF TEXAS PLUGGING REPORT for Tracking #100246

Owner:	**USACE**	Owner Well #:	**2-8**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 17.9 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 17.9 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839130

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100246**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839131

STATE OF TEXAS PLUGGING REPORT for Tracking #100248

Owner:	**USACE**	Owner Well #:	**2-10**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14.9 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14.9 ft to 10 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100248**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839133

STATE OF TEXAS PLUGGING REPORT for Tracking #100249

Owner:	**USACE**	Owner Well #:	**2-11**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14.5 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14.5 ft to 10 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100249**) on your written request.

Texas Department of Licensing & Regulation
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00839135

STATE OF TEXAS PLUGGING REPORT for Tracking #100250

Owner:	**USACE**	Owner Well #:	**2-12**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100250**) on your written request.

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P.O. Box 12157
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00839137

STATE OF TEXAS PLUGGING REPORT for Tracking #100251

Owner:	**USACE**	Owner Well #:	**2-13**
Address:	**HWY 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**HWY 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants INC** **1717 East Erwin** **Tyler , TX 75702**

00839138

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**20/40 sand from bottom to 10' Grout from 10 ft to surface**

Please include the plugging report's tracking number (Tracking **#100251**) on your written request.

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00839139

STATE OF TEXAS PLUGGING REPORT for Tracking #100486

Owner:	**USACE**	Owner Well #:	**12-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839140

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100486**) on your written request.

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00839141

STATE OF TEXAS PLUGGING REPORT for Tracking #100315

Owner:	**USACE**	Owner Well #:	**2-16**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 45" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants Inc.** **1717 east Erwin** **Tyler , TX 75702**

00839142

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft, then Grout to surface**

Please include the plugging report's tracking number (Tracking **#100315**) on your written request.

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00839143

STATE OF TEXAS PLUGGING REPORT for Tracking #100316

Owner:	**USACE**	Owner Well #:	**2-17**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 45" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants Inc.** **1717 east Erwin** **Tyler , TX 75702**

00839144

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft, then Grout to surface**

Please include the plugging report's tracking number (Tracking **#100316**) on your written request.

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00839145

STATE OF TEXAS PLUGGING REPORT for Tracking #100317

Owner:	**USACE**	Owner Well #:	**4-1**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants Inc.** **1717 east Erwin** **Tyler , TX 75702**

00839146

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft, then Grout to surface**

Please include the plugging report's tracking number (Tracking **#100317**) on your written request.

Texas Department of Licensing & Regulation
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00839147

STATE OF TEXAS PLUGGING REPORT for Tracking #100318

Owner:	**USACE**	Owner Well #:	**4-2**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.4 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.4 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants Inc.** **1717 east Erwin** **Tyler , TX 75702**

00839148

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft, then Grout to surface**

Please include the plugging report's tracking number (Tracking **#100318**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839149

STATE OF TEXAS PLUGGING REPORT for Tracking #100320

Owner:	**USACE**	Owner Well #:	**4-3**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25. ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers and Consultants Inc.** **1717 east Erwin** **Tyler , TX 75702**

00839150

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft, then Grout to surface**

Please include the plugging report's tracking number (Tracking **#100320**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839151

STATE OF TEXAS PLUGGING REPORT for Tracking #100350

Owner:	**USACE**	Owner Well #:	**4-4**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839152

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100350**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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00839153

STATE OF TEXAS PLUGGING REPORT for Tracking #100351

Owner:	**USACE**	Owner Well #:	**4-5**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839154

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100351**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839155

STATE OF TEXAS PLUGGING REPORT for Tracking #100352

Owner:	**USACE**	Owner Well #:	**4-6**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.5 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.5 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100352**) on your written request.

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(512) 463-7880

00839157

STATE OF TEXAS PLUGGING REPORT for Tracking #100353

Owner:	**USACE**	Owner Well #:	**4-7**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.5 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.5 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839158

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100353**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839159

STATE OF TEXAS PLUGGING REPORT for Tracking #100354

Owner:	**USACE**	Owner Well #:	**4-8**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/24/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839160

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100354**) on your written request.

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00839161

STATE OF TEXAS PLUGGING REPORT for Tracking #100355

Owner:	**USACE**	Owner Well #:	**4-9**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839162

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100355**) on your written request.

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00839163

STATE OF TEXAS PLUGGING REPORT for Tracking #100357

Owner:	**USACE**	Owner Well #:	**4-10**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26.9 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839164

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100357**) on your written request.

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00839165

STATE OF TEXAS PLUGGING REPORT for Tracking #100358

Owner:	**USACE**	Owner Well #:	**4-11**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839166

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100358**) on your written request.

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00839167

STATE OF TEXAS PLUGGING REPORT for Tracking #100359

Owner:	**USACE**	Owner Well #:	**4-12**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 16.5 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 16.5 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100359**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

00839169

STATE OF TEXAS PLUGGING REPORT for Tracking #100360

Owner:	**USACE**	Owner Well #:	**4-13**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 27 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100360**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

00839171

STATE OF TEXAS PLUGGING REPORT for Tracking #100361

Owner:	**USACE**	Owner Well #:	**4-14**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839172

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100361**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839173

STATE OF TEXAS PLUGGING REPORT for Tracking #100362

Owner:	**USACE**	Owner Well #:	**4-15**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100362**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839175

STATE OF TEXAS PLUGGING REPORT for Tracking #100363

Owner:	**USACE**	Owner Well #:	**4-16**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 17 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 17 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100363**) on your written request.

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00839177

STATE OF TEXAS PLUGGING REPORT for Tracking #100364

Owner:	**USACE**	Owner Well #:	**5-1**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to 15 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100364**) on your written request.

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00839179

STATE OF TEXAS PLUGGING REPORT for Tracking #100365

Owner:	**USACE**	Owner Well #:	**5-2**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 8 ft; Sack(s)/type of cement used: 2Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839180

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100365**) on your written request.

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00839181

STATE OF TEXAS PLUGGING REPORT for Tracking #100366

Owner:	**USACE**	Owner Well #:	**5-3**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 46" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 13 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to .5 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100366**) on your written request.

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00839183

STATE OF TEXAS PLUGGING REPORT for Tracking #100367

Owner:	**USACE**	Owner Well #:	**5-4**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/28/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100367**) on your written request.

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00839185

STATE OF TEXAS PLUGGING REPORT for Tracking #100368

Owner:	**USACE**	Owner Well #:	**5-5**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 13.5 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 13.5 ft to 10 ft; Sack(s)/type of cement used: 1 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100368**) on your written request.

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00839187

STATE OF TEXAS PLUGGING REPORT for Tracking #100369

Owner:	**USACE**	Owner Well #:	**5-6**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to 2.5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100369**) on your written request.

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00839189

STATE OF TEXAS PLUGGING REPORT for Tracking #100370

Owner:	**USACE**	Owner Well #:	**5-7**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100370**) on your written request.

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00839191

STATE OF TEXAS PLUGGING REPORT for Tracking #100371

Owner:	**USACE**	Owner Well #:	**5-8**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22.5 ft to .4 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22.5 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100371**) on your written request.

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00839193

STATE OF TEXAS PLUGGING REPORT for Tracking #100372

Owner:	**USACE**	Owner Well #:	**5-9**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100372**) on your written request.

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00839195

STATE OF TEXAS PLUGGING REPORT for Tracking #100373

Owner:	**USACE**	Owner Well #:	**5-10**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100373**) on your written request.

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00839197

STATE OF TEXAS PLUGGING REPORT for Tracking #100374

Owner:	**USACE**	Owner Well #:	**5-11**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100374**) on your written request.

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00839199

STATE OF TEXAS PLUGGING REPORT for Tracking #100375

Owner:	**USACE**	Owner Well #:	**5-12**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839200

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100375**) on your written request.

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00839201

STATE OF TEXAS PLUGGING REPORT for Tracking #100376

Owner:	**USACE**	Owner Well #:	**5-13**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839202

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100376**) on your written request.

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(512) 463-7880

00839203

STATE OF TEXAS PLUGGING REPORT for Tracking #100377

Owner:	**USACE**	Owner Well #:	**5-14**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100377**) on your written request.

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00839205

STATE OF TEXAS PLUGGING REPORT for Tracking #100378

Owner:	**USACE**	Owner Well #:	**5-15**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100378**) on your written request.

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00839207

STATE OF TEXAS PLUGGING REPORT for Tracking #100379

Owner:	**USACE**	Owner Well #:	**6-1**
Address:	**Hwy43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 27 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers&Consulting** **1717 East Erwin** **Tyler , TX 75702**

00839208

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 Ft. Grout to surface**

Please include the plugging report's tracking number (Tracking **#100379**) on your written request.

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00839209

STATE OF TEXAS PLUGGING REPORT for Tracking #100380

Owner:	**USACE**	Owner Well #:	**6-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839210

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100380**) on your written request.

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00839211

STATE OF TEXAS PLUGGING REPORT for Tracking #100381

Owner:	**USACE**	Owner Well #:	**6-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839212

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100381**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839213

STATE OF TEXAS PLUGGING REPORT for Tracking #100382

Owner:	**USACE**	Owner Well #:	**6-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839214

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100382**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839215

STATE OF TEXAS PLUGGING REPORT for Tracking #100383

Owner:	**USACE**	Owner Well #:	**6-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .4 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839216

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100383**) on your written request.

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00839217

STATE OF TEXAS PLUGGING REPORT for Tracking #100384

Owner:	**USACE**	Owner Well #:	**6-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839218

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100384**) on your written request.

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00839219

STATE OF TEXAS PLUGGING REPORT for Tracking #100385

Owner:	**USACE**	Owner Well #:	**6-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839220

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100385**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839221

STATE OF TEXAS PLUGGING REPORT for Tracking #100386

Owner:	**USACE**	Owner Well #:	**6-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839222

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100386**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839223

STATE OF TEXAS PLUGGING REPORT for Tracking #100387

Owner:	**USACE**	Owner Well #:	**6-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839224

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100387**) on your written request.

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00839225

STATE OF TEXAS PLUGGING REPORT for Tracking #100388

Owner:	**USACE**	Owner Well #:	**6-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100388**) on your written request.

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00839227

STATE OF TEXAS PLUGGING REPORT for Tracking #100389

Owner:	**USACE**	Owner Well #:	**6-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839228

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100389**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839229

STATE OF TEXAS PLUGGING REPORT for Tracking #100390

Owner:	**USACE**	Owner Well #:	**6-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839230

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100390**) on your written request.

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00839231

STATE OF TEXAS PLUGGING REPORT for Tracking #100391

Owner:	**USACE**	Owner Well #:	**6-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/29/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 16 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 16 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839232

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100391**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839233

STATE OF TEXAS PLUGGING REPORT for Tracking #100392

Owner:	**USACE**	Owner Well #:	**7-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839234

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100392**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839235

STATE OF TEXAS PLUGGING REPORT for Tracking #100393

Owner:	**USACE**	Owner Well #:	**7-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839236

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100393**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839237

STATE OF TEXAS PLUGGING REPORT for Tracking #100394

Owner:	**USACE**	Owner Well #:	**7-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839238

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100394**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839239

STATE OF TEXAS PLUGGING REPORT for Tracking #100395

Owner:	**USACE**	Owner Well #:	**7-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839240

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100395**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839241

STATE OF TEXAS PLUGGING REPORT for Tracking #100396

Owner:	**USACE**	Owner Well #:	**7-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100396**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839243

STATE OF TEXAS PLUGGING REPORT for Tracking #100397

Owner:	**USACE**	Owner Well #:	**7-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839244

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100397**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839245

STATE OF TEXAS PLUGGING REPORT for Tracking #100398

Owner:	**USACE**	Owner Well #:	**7-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839246

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100398**) on your written request.

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00839247

STATE OF TEXAS PLUGGING REPORT for Tracking #100399

Owner:	**USACE**	Owner Well #:	**7-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20.5 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20.5 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839248

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100399**) on your written request.

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00839249

STATE OF TEXAS PLUGGING REPORT for Tracking #100400

Owner:	**USACE**	Owner Well #:	**7-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20.5 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839250

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100400**) on your written request.

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00839251

STATE OF TEXAS PLUGGING REPORT for Tracking #100401

Owner:	**USACE**	Owner Well #:	**7-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 15 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839252

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100401**) on your written request.

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00839253

STATE OF TEXAS PLUGGING REPORT for Tracking #100402

Owner:	**USACE**	Owner Well #:	**7-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839254

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100402**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839255

STATE OF TEXAS PLUGGING REPORT for Tracking #100403

Owner:	**USACE**	Owner Well #:	**7-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .10 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839256

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100403**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839257

STATE OF TEXAS PLUGGING REPORT for Tracking #100404

Owner:	**USACE**	Owner Well #:	**7-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839258

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100404**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839259

STATE OF TEXAS PLUGGING REPORT for Tracking #100405

Owner:	**USACE**	Owner Well #:	**7-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 12 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839260

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100405**) on your written request.

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(512) 463-7880

00839261

STATE OF TEXAS PLUGGING REPORT for Tracking #100406

Owner:	**USACE**	Owner Well #:	**7-15**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100406**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839263

STATE OF TEXAS PLUGGING REPORT for Tracking #100407

Owner:	**USACE**	Owner Well #:	**7-16**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839264

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100407**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839265

STATE OF TEXAS PLUGGING REPORT for Tracking #100408

Owner:	**USACE**	Owner Well #:	**7-17**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100408**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839267

STATE OF TEXAS PLUGGING REPORT for Tracking #100409

Owner:	**USACE**	Owner Well #:	**7-18**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19.5 ft to 4.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19.5 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100409**) on your written request.

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(512) 463-7880

00839269

STATE OF TEXAS PLUGGING REPORT for Tracking #100410

Owner:	**USACE**	Owner Well #:	**7-19**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100410**) on your written request.

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00839271

STATE OF TEXAS PLUGGING REPORT for Tracking #100411

Owner:	**USACE**	Owner Well #:	**7-20**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**12/30/2014**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100411**) on your written request.

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00839273

STATE OF TEXAS PLUGGING REPORT for Tracking #100413

Owner:	**USACE**	Owner Well #:	**8-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18.5 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839274

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100413**) on your written request.

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00839275

STATE OF TEXAS PLUGGING REPORT for Tracking #100415

Owner:	**USACE**	Owner Well #:	**8-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24. ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839276

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100415**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839277

STATE OF TEXAS PLUGGING REPORT for Tracking #100416

Owner:	**USACE**	Owner Well #:	**8-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24. ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839278

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100416**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839279

STATE OF TEXAS PLUGGING REPORT for Tracking #100417

Owner:	**USACE**	Owner Well #:	**8-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22.7 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22.7 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839280

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100417**) on your written request.

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Austin, TX 78711
(512) 463-7880

00839281

STATE OF TEXAS PLUGGING REPORT for Tracking #100418

Owner:	**USACE**	Owner Well #:	**8-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.10 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.10 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100418**) on your written request.

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(512) 463-7880

00839283

STATE OF TEXAS PLUGGING REPORT for Tracking #100419

Owner:	**USACE**	Owner Well #:	**8-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839284

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100419**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839285

STATE OF TEXAS PLUGGING REPORT for Tracking #100420

Owner:	**USACE**	Owner Well #:	**8-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100420**) on your written request.

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00839287

STATE OF TEXAS PLUGGING REPORT for Tracking #100421

Owner:	**USACE**	Owner Well #:	**8-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839288

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100421**) on your written request.

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00839289

STATE OF TEXAS PLUGGING REPORT for Tracking #100422

Owner:	**USACE**	Owner Well #:	**8-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839290

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100422**) on your written request.

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(512) 463-7880

00839291

STATE OF TEXAS PLUGGING REPORT for Tracking #100423

Owner:	**USACE**	Owner Well #:	**8-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839292

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100423**) on your written request.

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00839293

STATE OF TEXAS PLUGGING REPORT for Tracking #100424

Owner:	**USACE**	Owner Well #:	**8-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100424**) on your written request.

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00839295

STATE OF TEXAS PLUGGING REPORT for Tracking #100425

Owner:	**USACE**	Owner Well #:	**8-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839296

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100425**) on your written request.

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00839297

STATE OF TEXAS PLUGGING REPORT for Tracking #100426

Owner:	**USACE**	Owner Well #:	**8-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to 10.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839298

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100426**) on your written request.

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00839299

STATE OF TEXAS PLUGGING REPORT for Tracking #100427

Owner:	**USACE**	Owner Well #:	**9-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839300

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100427**) on your written request.

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00839301

STATE OF TEXAS PLUGGING REPORT for Tracking #100428

Owner:	**USACE**	Owner Well #:	**9-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/7/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839302

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100428**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839303

STATE OF TEXAS PLUGGING REPORT for Tracking #100429

Owner:	**USACE**	Owner Well #:	**9-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100429**) on your written request.

Texas Department of Licensing & Regulation
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00839305

STATE OF TEXAS PLUGGING REPORT for Tracking #100430

Owner:	**USACE**	Owner Well #:	**9-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22.5 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22.5 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839306

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100430**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839307

STATE OF TEXAS PLUGGING REPORT for Tracking #100431

Owner:	**USACE**	Owner Well #:	**9-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.0 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839308

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100431**) on your written request.

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(512) 463-7880

00839309

STATE OF TEXAS PLUGGING REPORT for Tracking #100432

Owner:	**USACE**	Owner Well #:	**9-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23.0 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100432**) on your written request.

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00839311

STATE OF TEXAS PLUGGING REPORT for Tracking #100433

Owner:	**USACE**	Owner Well #:	**9-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20.0 ft to .10 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100433**) on your written request.

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00839313

STATE OF TEXAS PLUGGING REPORT for Tracking #100434

Owner:	**USACE**	Owner Well #:	**9-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839314

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100434**) on your written request.

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00839315

STATE OF TEXAS PLUGGING REPORT for Tracking #100435

Owner:	**USACE**	Owner Well #:	**9-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100435**) on your written request.

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00839317

STATE OF TEXAS PLUGGING REPORT for Tracking #100436

Owner:	**USACE**	Owner Well #:	**9-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 17.0 ft to 1.5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 17.0 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100436**) on your written request.

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00839319

STATE OF TEXAS PLUGGING REPORT for Tracking #100437

Owner:	**USACE**	Owner Well #:	**9-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19.0 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839320

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100437**) on your written request.

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00839321

STATE OF TEXAS PLUGGING REPORT for Tracking #100438

Owner:	**USACE**	Owner Well #:	**9-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14.0 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100438**) on your written request.

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00839323

STATE OF TEXAS PLUGGING REPORT for Tracking #100439

Owner:	**USACE**	Owner Well #:	**9-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839324

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100439**) on your written request.

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00839325

STATE OF TEXAS PLUGGING REPORT for Tracking #100440

Owner:	**USACE**	Owner Well #:	**9-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100440**) on your written request.

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00839327

STATE OF TEXAS PLUGGING REPORT for Tracking #100441

Owner:	**USACE**	Owner Well #:	**10-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839328

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100441**) on your written request.

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00839329

STATE OF TEXAS PLUGGING REPORT for Tracking #100442

Owner:	**USACE**	Owner Well #:	**10-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839330

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100442**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839331

STATE OF TEXAS PLUGGING REPORT for Tracking #100443

Owner:	**USACE**	Owner Well #:	**10-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839332

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100443**) on your written request.

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(512) 463-7880

00839333

STATE OF TEXAS PLUGGING REPORT for Tracking #100444

Owner:	**USACE**	Owner Well #:	**10-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100444**) on your written request.

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00839335

STATE OF TEXAS PLUGGING REPORT for Tracking #100445

Owner:	**USACE**	Owner Well #:	**10-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100445**) on your written request.

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00839337

STATE OF TEXAS PLUGGING REPORT for Tracking #100446

Owner:	**USACE**	Owner Well #:	**10-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100446**) on your written request.

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00839339

STATE OF TEXAS PLUGGING REPORT for Tracking #100448

Owner:	**USACE**	Owner Well #:	**10-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839340

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100448**) on your written request.

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00839341

STATE OF TEXAS PLUGGING REPORT for Tracking #100449

Owner:	**USACE**	Owner Well #:	**10-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839342

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100449**) on your written request.

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00839343

STATE OF TEXAS PLUGGING REPORT for Tracking #100450

Owner:	**USACE**	Owner Well #:	**10-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100450**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839345

STATE OF TEXAS PLUGGING REPORT for Tracking #100451

Owner:	**USACE**	Owner Well #:	**10-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839346

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100451**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839347

STATE OF TEXAS PLUGGING REPORT for Tracking #100452

Owner:	**USACE**	Owner Well #:	**10-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839348

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100452**) on your written request.

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(512) 463-7880

00839349

STATE OF TEXAS PLUGGING REPORT for Tracking #100453

Owner:	**USACE**	Owner Well #:	**10-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839350

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100453**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839351

STATE OF TEXAS PLUGGING REPORT for Tracking #100454

Owner:	**USACE**	Owner Well #:	**10-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100454**) on your written request.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839353

STATE OF TEXAS PLUGGING REPORT for Tracking #100455

Owner:	**USACE**	Owner Well #:	**10-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839354

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100455**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839355

STATE OF TEXAS PLUGGING REPORT for Tracking #100456

Owner:	**USACE**	Owner Well #:	**10-15**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/10/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 8 ft to 0 ft; Sack(s)/type of cement used: (No Data)** 2nd Interval: **From 8 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 8 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839356

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100456**) on your written request.

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(512) 463-7880

00839357

STATE OF TEXAS PLUGGING REPORT for Tracking #100457

Owner:	**USACE**	Owner Well #:	**11-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100457**) on your written request.

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00839359

STATE OF TEXAS PLUGGING REPORT for Tracking #100458

Owner:	**USACE**	Owner Well #:	**11-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839360

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100458**) on your written request.

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00839361

STATE OF TEXAS PLUGGING REPORT for Tracking #100459

Owner:	**USACE**	Owner Well #:	**11-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100459**) on your written request.

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00839363

STATE OF TEXAS PLUGGING REPORT for Tracking #100460

Owner:	**USACE**	Owner Well #:	**11-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100460**) on your written request.

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00839365

STATE OF TEXAS PLUGGING REPORT for Tracking #100461

Owner:	**USACE**	Owner Well #:	**11-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839366

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100461**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839367

STATE OF TEXAS PLUGGING REPORT for Tracking #100462

Owner:	**USACE**	Owner Well #:	**11-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839368

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100462**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839369

STATE OF TEXAS PLUGGING REPORT for Tracking #100463

Owner:	**USACE**	Owner Well #:	**11-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839370

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100463**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839371

STATE OF TEXAS PLUGGING REPORT for Tracking #100464

Owner:	**USACE**	Owner Well #:	**11-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100464**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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00839373

STATE OF TEXAS PLUGGING REPORT for Tracking #100465

Owner:	**USACE**	Owner Well #:	**11-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 16 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839374

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100465**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839375

STATE OF TEXAS PLUGGING REPORT for Tracking #100466

Owner:	**USACE**	Owner Well #:	**11-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to .0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100466**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839377

STATE OF TEXAS PLUGGING REPORT for Tracking #100467

Owner:	**USACE**	Owner Well #:	**11-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 15 ft to 3.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 15 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839378

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100467**) on your written request.

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(512) 463-7880

00839379

STATE OF TEXAS PLUGGING REPORT for Tracking #100468

Owner:	**USACE**	Owner Well #:	**11-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100468**) on your written request.

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00839381

STATE OF TEXAS PLUGGING REPORT for Tracking #100469

Owner:	**USACE**	Owner Well #:	**11-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100469**) on your written request.

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00839383

STATE OF TEXAS PLUGGING REPORT for Tracking #100470

Owner:	**USACE**	Owner Well #:	**11-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839384

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100470**) on your written request.

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00839385

STATE OF TEXAS PLUGGING REPORT for Tracking #100471

Owner:	**USACE**	Owner Well #:	**11-15**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100471**) on your written request.

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00839387

STATE OF TEXAS PLUGGING REPORT for Tracking #100472

Owner:	**USACE**	Owner Well #:	**11-16**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/13/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100472**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839389

STATE OF TEXAS PLUGGING REPORT for Tracking #100473

Owner:	**USACE**	Owner Well #:	**12-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839390

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100473**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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00839391

STATE OF TEXAS PLUGGING REPORT for Tracking #100474

Owner:	**USACE**	Owner Well #:	**12-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839392

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100474**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839393

STATE OF TEXAS PLUGGING REPORT for Tracking #100475

Owner:	**USACE**	Owner Well #:	**12-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839394

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100475**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839395

STATE OF TEXAS PLUGGING REPORT for Tracking #100476

Owner:	**USACE**	Owner Well #:	**12-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839396

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100476**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839397

STATE OF TEXAS PLUGGING REPORT for Tracking #100477

Owner:	**USACE**	Owner Well #:	**12-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839398

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100477**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839399

STATE OF TEXAS PLUGGING REPORT for Tracking #100478

Owner:	**USACE**	Owner Well #:	**12-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839400

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100478**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839401

STATE OF TEXAS PLUGGING REPORT for Tracking #100479

Owner:	**USACE**	Owner Well #:	**12-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839402

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100479**) on your written request.

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00839403

STATE OF TEXAS PLUGGING REPORT for Tracking #100480

Owner:	**USACE**	Owner Well #:	**12-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100480**) on your written request.

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00839405

STATE OF TEXAS PLUGGING REPORT for Tracking #100481

Owner:	**USACE**	Owner Well #:	**12-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839406

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100481**) on your written request.

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00839407

STATE OF TEXAS PLUGGING REPORT for Tracking #100482

Owner:	**USACE**	Owner Well #:	**12-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839408

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100482**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839409

STATE OF TEXAS PLUGGING REPORT for Tracking #100483

Owner:	**USACE**	Owner Well #:	**12-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to 3 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839410

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100483**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839411

STATE OF TEXAS PLUGGING REPORT for Tracking #100484

Owner:	**USACE**	Owner Well #:	**12-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100484**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839413

STATE OF TEXAS PLUGGING REPORT for Tracking #100485

Owner:	**USACE**	Owner Well #:	**12-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839414

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100485**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839415

STATE OF TEXAS PLUGGING REPORT for Tracking #100486

Owner:	**USACE**	Owner Well #:	**12-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100486**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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00839417

STATE OF TEXAS PLUGGING REPORT for Tracking #100487

Owner:	**USACE**	Owner Well #:	**12-15**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100487**) on your written request.

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00839419

STATE OF TEXAS PLUGGING REPORT for Tracking #100488

Owner:	**USACE**	Owner Well #:	**12-16**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/14/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839420

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100488**) on your written request.

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00839421

STATE OF TEXAS PLUGGING REPORT for Tracking #100489

Owner:	**USACE**	Owner Well #:	**13-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23.0 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100489**) on your written request.

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00839423

STATE OF TEXAS PLUGGING REPORT for Tracking #100490

Owner:	**USACE**	Owner Well #:	**13-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.0 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839424

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100490**) on your written request.

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00839425

STATE OF TEXAS PLUGGING REPORT for Tracking #100491

Owner:	**USACE**	Owner Well #:	**13-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23.5 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23.5 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839426

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100491**) on your written request.

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00839427

STATE OF TEXAS PLUGGING REPORT for Tracking #100492

Owner:	**USACE**	Owner Well #:	**13-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23.5 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23.5 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839428

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100492**) on your written request.

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00839429

STATE OF TEXAS PLUGGING REPORT for Tracking #100493

Owner:	**USACE**	Owner Well #:	**13-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.0 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839430

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100493**) on your written request.

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00839431

STATE OF TEXAS PLUGGING REPORT for Tracking #100494

Owner:	**USACE**	Owner Well #:	**13-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.0 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100494**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839433

STATE OF TEXAS PLUGGING REPORT for Tracking #100495

Owner:	**USACE**	Owner Well #:	**13-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839434

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100495**) on your written request.

Texas Department of Licensing & Regulation
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00839435

STATE OF TEXAS PLUGGING REPORT for Tracking #100496

Owner:	**USACE**	Owner Well #:	**13-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839436

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100496**) on your written request.

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00839437

STATE OF TEXAS PLUGGING REPORT for Tracking #100497

Owner:	**USACE**	Owner Well #:	**13-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839438

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100497**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839439

STATE OF TEXAS PLUGGING REPORT for Tracking #100498

Owner:	**USACE**	Owner Well #:	**13-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839440

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100498**) on your written request.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839441

STATE OF TEXAS PLUGGING REPORT for Tracking #100499

Owner:	**USACE**	Owner Well #:	**13-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839442

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100499**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839443

STATE OF TEXAS PLUGGING REPORT for Tracking #100500

Owner:	**USACE**	Owner Well #:	**13-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100500**) on your written request.

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(512) 463-7880

00839445

STATE OF TEXAS PLUGGING REPORT for Tracking #100501

Owner:	**USACE**	Owner Well #:	**13-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839446

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100501**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

00839447

STATE OF TEXAS PLUGGING REPORT for Tracking #100502

Owner:	**USACE**	Owner Well #:	**13-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100502**) on your written request.

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00839449

STATE OF TEXAS PLUGGING REPORT for Tracking #100503

Owner:	**USACE**	Owner Well #:	**13-15**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to 4 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839450

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100503**) on your written request.

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00839451

STATE OF TEXAS PLUGGING REPORT for Tracking #100504

Owner:	**USACE**	Owner Well #:	**13-16**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100504**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839453

STATE OF TEXAS PLUGGING REPORT for Tracking #100505

Owner:	**USACE**	Owner Well #:	**14-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839454

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100505**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839455

STATE OF TEXAS PLUGGING REPORT for Tracking #100506

Owner:	**USACE**	Owner Well #:	**14-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839456

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100506**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839457

STATE OF TEXAS PLUGGING REPORT for Tracking #100507

Owner:	**USACE**	Owner Well #:	**14-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839458

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100507**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839459

STATE OF TEXAS PLUGGING REPORT for Tracking #100508

Owner:	**USACE**	Owner Well #:	**14-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839460

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100508**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839461

STATE OF TEXAS PLUGGING REPORT for Tracking #100509

Owner:	**USACE**	Owner Well #:	**14-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839462

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100509**) on your written request.

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00839463

STATE OF TEXAS PLUGGING REPORT for Tracking #100510

Owner:	**USACE**	Owner Well #:	**14-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100510**) on your written request.

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00839465

STATE OF TEXAS PLUGGING REPORT for Tracking #100511

Owner:	**USACE**	Owner Well #:	**14-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/15/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839466

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100511**) on your written request.

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00839467

STATE OF TEXAS PLUGGING REPORT for Tracking #100512

Owner:	**USACE**	Owner Well #:	**14-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839468

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100512**) on your written request.

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00839469

STATE OF TEXAS PLUGGING REPORT for Tracking #100513

Owner:	**USACE**	Owner Well #:	**14-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839470

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100513**) on your written request.

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00839471

STATE OF TEXAS PLUGGING REPORT for Tracking #100514

Owner:	**USACE**	Owner Well #:	**14-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839472

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100514**) on your written request.

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00839473

STATE OF TEXAS PLUGGING REPORT for Tracking #100515

Owner:	**USACE**	Owner Well #:	**14-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839474

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100515**) on your written request.

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00839475

STATE OF TEXAS PLUGGING REPORT for Tracking #100516

Owner:	**USACE**	Owner Well #:	**14-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839476

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100516**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839477

STATE OF TEXAS PLUGGING REPORT for Tracking #100517

Owner:	**USACE**	Owner Well #:	**14-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839478

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100517**) on your written request.

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00839479

STATE OF TEXAS PLUGGING REPORT for Tracking #100518

Owner:	**USACE**	Owner Well #:	**14-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 17 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 17 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100518**) on your written request.

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(512) 463-7880

00839481

STATE OF TEXAS PLUGGING REPORT for Tracking #100519

Owner:	**USACE**	Owner Well #:	**14-15**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839482

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100519**) on your written request.

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00839483

STATE OF TEXAS PLUGGING REPORT for Tracking #100520

Owner:	**USACE**	Owner Well #:	**14-16**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839484

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100520**) on your written request.

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(512) 463-7880

00839485

STATE OF TEXAS PLUGGING REPORT for Tracking #100521

Owner:	**USACE**	Owner Well #:	**14-17**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839486

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100521**) on your written request.

Texas Department of Licensing & Regulation
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00839487

STATE OF TEXAS PLUGGING REPORT for Tracking #100522

Owner:	**USACE**	Owner Well #:	**14-18**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 16 ft to 1 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 16 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100522**) on your written request.

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(512) 463-7880

00839489

STATE OF TEXAS PLUGGING REPORT for Tracking #100523

Owner:	**USACE**	Owner Well #:	**14-19**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839490

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100523**) on your written request.

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00839491

STATE OF TEXAS PLUGGING REPORT for Tracking #100524

Owner:	**USACE**	Owner Well #:	**14-20**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 018 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839492

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100524**) on your written request.

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00839493

STATE OF TEXAS PLUGGING REPORT for Tracking #100525

Owner:	**USACE**	Owner Well #:	**14-21**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839494

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100525**) on your written request.

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00839495

STATE OF TEXAS PLUGGING REPORT for Tracking #100526

Owner:	**USACE**	Owner Well #:	**14-22**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100526**) on your written request.

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(512) 463-7880

00839497

STATE OF TEXAS PLUGGING REPORT for Tracking #100527

Owner:	**USACE**	Owner Well #:	**14-23**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/16/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100527**) on your written request.

Texas Department of Licensing & Regulation
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00839499

STATE OF TEXAS PLUGGING REPORT for Tracking #100528

Owner:	**USACE**	Owner Well #:	**15-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839500

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100528**) on your written request.

Texas Department of Licensing & Regulation
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00839501

STATE OF TEXAS PLUGGING REPORT for Tracking #100529

Owner:	**USACE**	Owner Well #:	**15-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839502

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100529**) on your written request.

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00839503

STATE OF TEXAS PLUGGING REPORT for Tracking #100530

Owner:	**USACE**	Owner Well #:	**15-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839504

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100530**) on your written request.

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00839505

STATE OF TEXAS PLUGGING REPORT for Tracking #100531

Owner:	**USACE**	Owner Well #:	**15-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839506

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100531**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839507

STATE OF TEXAS PLUGGING REPORT for Tracking #100532

Owner:	**USACE**	Owner Well #:	**15-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839508

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100532**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839509

STATE OF TEXAS PLUGGING REPORT for Tracking #100533

Owner:	**USACE**	Owner Well #:	**15-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839510

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100533**) on your written request.

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Austin, TX 78711
(512) 463-7880

00839511

STATE OF TEXAS PLUGGING REPORT for Tracking #100534

Owner:	**USACE**	Owner Well #:	**15-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839512

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100534**) on your written request.

Texas Department of Licensing & Regulation
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00839513

STATE OF TEXAS PLUGGING REPORT for Tracking #100536

Owner:	**USACE**	Owner Well #:	**15-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839514

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100536**) on your written request.

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00839515

STATE OF TEXAS PLUGGING REPORT for Tracking #100537

Owner:	**USACE**	Owner Well #:	**15-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100537**) on your written request.

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00839517

STATE OF TEXAS PLUGGING REPORT for Tracking #100538

Owner:	**USACE**	Owner Well #:	**15-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839518

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100538**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839519

STATE OF TEXAS PLUGGING REPORT for Tracking #100539

Owner:	**USACE**	Owner Well #:	**15-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839520

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100539**) on your written request.

Texas Department of Licensing & Regulation
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00839521

STATE OF TEXAS PLUGGING REPORT for Tracking #100540

Owner:	**USACE**	Owner Well #:	**15-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839522

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100540**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

00839523

STATE OF TEXAS PLUGGING REPORT for Tracking #100541

Owner:	**USACE**	Owner Well #:	**15-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839524

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100541**) on your written request.

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(512) 463-7880

00839525

STATE OF TEXAS PLUGGING REPORT for Tracking #100542

Owner:	**USACE**	Owner Well #:	**15-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 17 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 17 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839526

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100542**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839527

STATE OF TEXAS PLUGGING REPORT for Tracking #100543

Owner:	**USACE**	Owner Well #:	**15-15**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 43" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 15 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 15 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839528

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100543**) on your written request.

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(512) 463-7880

00839529

STATE OF TEXAS PLUGGING REPORT for Tracking #100544

Owner:	**USACE**	Owner Well #:	**15-16**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 50" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/19/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839530

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100544**) on your written request.

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00839531

STATE OF TEXAS PLUGGING REPORT for Tracking #100545

Owner:	**USACE**	Owner Well #:	**16-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839532

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100545**) on your written request.

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00839533

STATE OF TEXAS PLUGGING REPORT for Tracking #100546

Owner:	**USACE**	Owner Well #:	**16-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839534

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100546**) on your written request.

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00839535

STATE OF TEXAS PLUGGING REPORT for Tracking #100547

Owner:	**USACE**	Owner Well #:	**16-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100547**) on your written request.

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00839537

STATE OF TEXAS PLUGGING REPORT for Tracking #100548

Owner:	**USACE**	Owner Well #:	**16-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100548**) on your written request.

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00839539

STATE OF TEXAS PLUGGING REPORT for Tracking #100549

Owner:	**USACE**	Owner Well #:	**16-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 27 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839540

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100549**) on your written request.

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00839541

STATE OF TEXAS PLUGGING REPORT for Tracking #100550

Owner:	**USACE**	Owner Well #:	**16-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 26 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839542

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100550**) on your written request.

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00839543

STATE OF TEXAS PLUGGING REPORT for Tracking #100551

Owner:	**USACE**	Owner Well #:	**16-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839544

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100551**) on your written request.

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00839545

STATE OF TEXAS PLUGGING REPORT for Tracking #100552

Owner:	**USACE**	Owner Well #:	**16-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 15 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 15 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839546

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100552**) on your written request.

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00839547

STATE OF TEXAS PLUGGING REPORT for Tracking #100553

Owner:	**USACE**	Owner Well #:	**16-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839548

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100553**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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00839549

STATE OF TEXAS PLUGGING REPORT for Tracking #100554

Owner:	**USACE**	Owner Well #:	**16-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839550

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100554**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839551

STATE OF TEXAS PLUGGING REPORT for Tracking #100555

Owner:	**USACE**	Owner Well #:	**16-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839552

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100555**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839553

STATE OF TEXAS PLUGGING REPORT for Tracking #100556

Owner:	**USACE**	Owner Well #:	**16-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839554

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100556**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839555

STATE OF TEXAS PLUGGING REPORT for Tracking #100557

Owner:	**USACE**	Owner Well #:	**16-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100557**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839557

STATE OF TEXAS PLUGGING REPORT for Tracking #100558

Owner:	**USACE**	Owner Well #:	**16-14**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/20/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839558

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100558**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839559

STATE OF TEXAS PLUGGING REPORT for Tracking #100559

Owner:	**USACE**	Owner Well #:	**17-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100559**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839561

STATE OF TEXAS PLUGGING REPORT for Tracking #100560

Owner:	**USACE**	Owner Well #:	**17-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839562

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100560**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839563

STATE OF TEXAS PLUGGING REPORT for Tracking #100561

Owner:	**USACE**	Owner Well #:	**17-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839564

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100561**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839565

STATE OF TEXAS PLUGGING REPORT for Tracking #100562

Owner:	**USACE**	Owner Well #:	**17-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839566

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100562**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839567

STATE OF TEXAS PLUGGING REPORT for Tracking #100563

Owner:	**USACE**	Owner Well #:	**17-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100563**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839569

STATE OF TEXAS PLUGGING REPORT for Tracking #100564

Owner:	**USACE**	Owner Well #:	**17-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to .4 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100564**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839571

STATE OF TEXAS PLUGGING REPORT for Tracking #100565

Owner:	**USACE**	Owner Well #:	**17-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839572

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100565**) on your written request.

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(512) 463-7880

00839573

STATE OF TEXAS PLUGGING REPORT for Tracking #100566

Owner:	**USACE**	Owner Well #:	**17-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 17 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 17 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839574

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100566**) on your written request.

Texas Department of Licensing & Regulation
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00839575

STATE OF TEXAS PLUGGING REPORT for Tracking #100567

Owner:	**USACE**	Owner Well #:	**17-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to 1.8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839576

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100567**) on your written request.

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00839577

STATE OF TEXAS PLUGGING REPORT for Tracking #100568

Owner:	**USACE**	Owner Well #:	**17-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839578

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100568**) on your written request.

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00839579

STATE OF TEXAS PLUGGING REPORT for Tracking #100569

Owner:	**USACE**	Owner Well #:	**17-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839580

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10Ft.,then grout to surface**

Please include the plugging report's tracking number (Tracking **#100569**) on your written request.

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00839581

STATE OF TEXAS PLUGGING REPORT for Tracking #100571

Owner:	**USACE**	Owner Well #:	**17-12**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100571**) on your written request.

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00839583

STATE OF TEXAS PLUGGING REPORT for Tracking #100572

Owner:	**USACE**	Owner Well #:	**17-13**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100572**) on your written request.

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00839585

STATE OF TEXAS PLUGGING REPORT for Tracking #100573

Owner:	**USACE**	Owner Well #:	**18-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/21/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100573**) on your written request.

Texas Department of Licensing & Regulation
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00839587

STATE OF TEXAS PLUGGING REPORT for Tracking #100577

Owner:	**USACE**	Owner Well #:	**18-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100577**) on your written request.

Texas Department of Licensing & Regulation
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00839589

STATE OF TEXAS PLUGGING REPORT for Tracking #100581

Owner:	**USACE**	Owner Well #:	**18-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839590

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100581**) on your written request.

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(512) 463-7880

00839591

STATE OF TEXAS PLUGGING REPORT for Tracking #100582

Owner:	**USACE**	Owner Well #:	**18-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100582**) on your written request.

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00839593

STATE OF TEXAS PLUGGING REPORT for Tracking #100584

Owner:	**USACE**	Owner Well #:	**18-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 17 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 17 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100584**) on your written request.

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00839595

STATE OF TEXAS PLUGGING REPORT for Tracking #100586

Owner:	**USACE**	Owner Well #:	**18-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 16 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 16 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100586**) on your written request.

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00839597

STATE OF TEXAS PLUGGING REPORT for Tracking #100590

Owner:	**USACE**	Owner Well #:	**18-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100590**) on your written request.

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00839599

STATE OF TEXAS PLUGGING REPORT for Tracking #100592

Owner:	**USACE**	Owner Well #:	**18-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839600

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100592**) on your written request.

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(512) 463-7880

00839601

STATE OF TEXAS PLUGGING REPORT for Tracking #100592

Owner:	**USACE**	Owner Well #:	**18-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839602

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100592**) on your written request.

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00839603

STATE OF TEXAS PLUGGING REPORT for Tracking #100595

Owner:	**USACE**	Owner Well #:	**18-9**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100595**) on your written request.

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00839605

STATE OF TEXAS PLUGGING REPORT for Tracking #100597

Owner:	**USACE**	Owner Well #:	**18-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 16 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 16 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839606

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100597**) on your written request.

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00839607

STATE OF TEXAS PLUGGING REPORT for Tracking #100597

Owner:	**USACE**	Owner Well #:	**18-10**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 16 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 16 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839608

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100597**) on your written request.

Texas Department of Licensing & Regulation
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00839609

STATE OF TEXAS PLUGGING REPORT for Tracking #100599

Owner:	**USACE**	Owner Well #:	**18-11**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 14 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100599**) on your written request.

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(512) 463-7880

00839611

STATE OF TEXAS PLUGGING REPORT for Tracking #100602

Owner:	**USACE**	Owner Well #:	**19-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100602**) on your written request.

Texas Department of Licensing & Regulation
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00839613

STATE OF TEXAS PLUGGING REPORT for Tracking #100604

Owner:	**USACE**	Owner Well #:	**19-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100604**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839615

STATE OF TEXAS PLUGGING REPORT for Tracking #100607

Owner:	**USACE**	Owner Well #:	**19-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839616

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100607**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839617

STATE OF TEXAS PLUGGING REPORT for Tracking #100610

Owner:	**USACE**	Owner Well #:	**19-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839618

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100610**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839619

STATE OF TEXAS PLUGGING REPORT for Tracking #100611

Owner:	**USACE**	Owner Well #:	**19-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839620

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100611**) on your written request.

Texas Department of Licensing & Regulation
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00839621

STATE OF TEXAS PLUGGING REPORT for Tracking #100612

Owner:	**USACE**	Owner Well #:	**19-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839622

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100612**) on your written request.

Texas Department of Licensing & Regulation
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00839623

STATE OF TEXAS PLUGGING REPORT for Tracking #100613

Owner:	**USACE**	Owner Well #:	**19-7**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 12 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 12 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839624

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100613**) on your written request.

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00839625

STATE OF TEXAS PLUGGING REPORT for Tracking #100614

Owner:	**USACE**	Owner Well #:	**19-8**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839626

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100614**) on your written request.

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(512) 463-7880

00839627

STATE OF TEXAS PLUGGING REPORT for Tracking #100615

Owner:	**USACE**	Owner Well #:	**20-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100615**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839629

STATE OF TEXAS PLUGGING REPORT for Tracking #100616

Owner:	**USACE**	Owner Well #:	**20-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839630

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100616**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

00839631

STATE OF TEXAS PLUGGING REPORT for Tracking #100617

Owner:	**USACE**	Owner Well #:	**20-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839632

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100617**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

00839633

STATE OF TEXAS PLUGGING REPORT for Tracking #100618

Owner:	**USACE**	Owner Well #:	**20-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 49" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839634

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100618**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

00839635

STATE OF TEXAS PLUGGING REPORT for Tracking #100619

Owner:	**USACE**	Owner Well #:	**21-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839636

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100619**) on your written request.

Texas Department of Licensing & Regulation
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00839637

STATE OF TEXAS PLUGGING REPORT for Tracking #100620

Owner:	**USACE**	Owner Well #:	**21-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/22/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839638

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100620**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839639

STATE OF TEXAS PLUGGING REPORT for Tracking #100621

Owner:	**USACE**	Owner Well #:	**23-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 44" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839640

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100621**) on your written request.

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(512) 463-7880

00839641

STATE OF TEXAS PLUGGING REPORT for Tracking #100622

Owner:	**USACE**	Owner Well #:	**23-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100622**) on your written request.

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00839643

STATE OF TEXAS PLUGGING REPORT for Tracking #100623

Owner:	**USACE**	Owner Well #:	**23-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 14 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839644

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100623**) on your written request.

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00839645

STATE OF TEXAS PLUGGING REPORT for Tracking #100624

Owner:	**USACE**	Owner Well #:	**24-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839646

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100624**) on your written request.

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00839647

STATE OF TEXAS PLUGGING REPORT for Tracking #100625

Owner:	**USACE**	Owner Well #:	**24-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19 ft to 9 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839648

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100625**) on your written request.

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00839649

STATE OF TEXAS PLUGGING REPORT for Tracking #100626

Owner:	**USACE**	Owner Well #:	**24-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839650

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100626**) on your written request.

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00839651

STATE OF TEXAS PLUGGING REPORT for Tracking #100627

Owner:	**USACE**	Owner Well #:	**24-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100627**) on your written request.

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(512) 463-7880

00839653

STATE OF TEXAS PLUGGING REPORT for Tracking #100628

Owner:	**USACE**	Owner Well #:	**24-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839654

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100628**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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00839655

STATE OF TEXAS PLUGGING REPORT for Tracking #100629

Owner:	**USACE**	Owner Well #:	**25-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21.0 ft to 1.5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839656

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100629**) on your written request.

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00839657

STATE OF TEXAS PLUGGING REPORT for Tracking #100630

Owner:	**USACE**	Owner Well #:	**25-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839658

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100630**) on your written request.

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(512) 463-7880

00839659

STATE OF TEXAS PLUGGING REPORT for Tracking #100631

Owner:	**USACE**	Owner Well #:	**26-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24.0 ft to 5.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839660

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100631**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839661

STATE OF TEXAS PLUGGING REPORT for Tracking #100632

Owner:	**USACE**	Owner Well #:	**26-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839662

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100632**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839663

STATE OF TEXAS PLUGGING REPORT for Tracking #100633

Owner:	**USACE**	Owner Well #:	**26-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100633**) on your written request.

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00839665

STATE OF TEXAS PLUGGING REPORT for Tracking #100634

Owner:	**USACE**	Owner Well #:	**26-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839666

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100634**) on your written request.

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00839667

STATE OF TEXAS PLUGGING REPORT for Tracking #100635

Owner:	**USACE**	Owner Well #:	**26-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 27 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839668

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100635**) on your written request.

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00839669

STATE OF TEXAS PLUGGING REPORT for Tracking #100636

Owner:	**USACE**	Owner Well #:	**27-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to 7.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839670

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100636**) on your written request.

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00839671

STATE OF TEXAS PLUGGING REPORT for Tracking #100637

Owner:	**USACE**	Owner Well #:	**27-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100637**) on your written request.

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(512) 463-7880

00839673

STATE OF TEXAS PLUGGING REPORT for Tracking #100638

Owner:	**USACE**	Owner Well #:	**27-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839674

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100638**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839675

STATE OF TEXAS PLUGGING REPORT for Tracking #100639

Owner:	**USACE**	Owner Well #:	**27-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 6.0 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 6.0 ft to 0 ft; Sack(s)/type of cement used: 1Bentonite** 2nd Interval: **From 6.0 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100639**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

00839677

STATE OF TEXAS PLUGGING REPORT for Tracking #100640

Owner:	**USACE**	Owner Well #:	**27-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100640**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

00839679

STATE OF TEXAS PLUGGING REPORT for Tracking #100641

Owner:	**USACE**	Owner Well #:	**28-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100641**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839681

STATE OF TEXAS PLUGGING REPORT for Tracking #100642

Owner:	**USACE**	Owner Well #:	**28-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 18.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 18.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100642**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839683

STATE OF TEXAS PLUGGING REPORT for Tracking #100643

Owner:	**USACE**	Owner Well #:	**28-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22.0 ft to 1.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100643**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839685

STATE OF TEXAS PLUGGING REPORT for Tracking #100644

Owner:	**USACE**	Owner Well #:	**28-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 26.0 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100644**) on your written request.

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P.O. Box 12157
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(512) 463-7880

00839687

STATE OF TEXAS PLUGGING REPORT for Tracking #100645

Owner:	**USACE**	Owner Well #:	**28-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 0 ft to 0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 28 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839688

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100645**) on your written request.

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(512) 463-7880

00839689

STATE OF TEXAS PLUGGING REPORT for Tracking #100646

Owner:	**USACE**	Owner Well #:	**28-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 42" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/24/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 12 ft to 2.0 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 12 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839690

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100646**) on your written request.

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00839691

STATE OF TEXAS PLUGGING REPORT for Tracking #100647

Owner:	**USACE**	Owner Well #:	**29-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839692

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100647**) on your written request.

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00839693

STATE OF TEXAS PLUGGING REPORT for Tracking #100648

Owner:	**USACE**	Owner Well #:	**29-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100648**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839695

STATE OF TEXAS PLUGGING REPORT for Tracking #100649

Owner:	**USACE**	Owner Well #:	**29-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839696

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100649**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839697

STATE OF TEXAS PLUGGING REPORT for Tracking #100650

Owner:	**USACE**	Owner Well #:	**29-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839698

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100650**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839699

STATE OF TEXAS PLUGGING REPORT for Tracking #100651

Owner:	**USACE**	Owner Well #:	**29-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839700

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100651**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839701

STATE OF TEXAS PLUGGING REPORT for Tracking #100652

Owner:	**USACE**	Owner Well #:	**29-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to 1.5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839702

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100652**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839703

STATE OF TEXAS PLUGGING REPORT for Tracking #100653

Owner:	**USACE**	Owner Well #:	**30-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839704

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100653**) on your written request.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839705

STATE OF TEXAS PLUGGING REPORT for Tracking #100655

Owner:	**USACE**	Owner Well #:	**30-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 48" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839706

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100655**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839707

STATE OF TEXAS PLUGGING REPORT for Tracking #100656

Owner:	**USACE**	Owner Well #:	**30-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 25 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 25 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839708

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100656**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839709

STATE OF TEXAS PLUGGING REPORT for Tracking #100657

Owner:	**USACE**	Owner Well #:	**30-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839710

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100657**) on your written request.

Texas Department of Licensing & Regulation
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00839711

STATE OF TEXAS PLUGGING REPORT for Tracking #100658

Owner:	**USACE**	Owner Well #:	**30-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100658**) on your written request.

Texas Department of Licensing & Regulation
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00839713

STATE OF TEXAS PLUGGING REPORT for Tracking #100659

Owner:	**USACE**	Owner Well #:	**30-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 23 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 23 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100659**) on your written request.

Texas Department of Licensing & Regulation
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(512) 463-7880

00839715

STATE OF TEXAS PLUGGING REPORT for Tracking #100660

Owner:	**USACE**	Owner Well #:	**31-1**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 17 ft to .8 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 17 ft to 10 ft; Sack(s)/type of cement used: 1 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100660**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839717

STATE OF TEXAS PLUGGING REPORT for Tracking #100661

Owner:	**USACE**	Owner Well #:	**31-2**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 19.5 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 19 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100661**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839719

STATE OF TEXAS PLUGGING REPORT for Tracking #100662

Owner:	**USACE**	Owner Well #:	**31-3**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 20 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

00839720

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100662**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839721

STATE OF TEXAS PLUGGING REPORT for Tracking #100663

Owner:	**USACE**	Owner Well #:	**31-4**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 22 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 22 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100663**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839723

STATE OF TEXAS PLUGGING REPORT for Tracking #100664

Owner:	**USACE**	Owner Well #:	**31-5**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 24 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 24 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100664**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

00839725

STATE OF TEXAS PLUGGING REPORT for Tracking #100665

Owner:	**USACE**	Owner Well #:	**31-6**
Address:	**Hwy 43** **Karnack , TX 75670**	Grid #:	**35-23-6**
Well Location:	**Hwy 43** **Karnack , TX 75670**	Latitude:	**32° 40' 47" N**
Well County:	**Harrison**	Longitude:	**094° 08' 41" W**
		GPS Brand Used:	**Garmin**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**No Data**
Driller's License Number of Original Well Driller:	**No Data**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Borehole:	**No Data**
Total Depth of Borehole:	**No Data**

Date Well Plugged:	**1/25/2015**
Person Actually Performing Plugging Operation:	**Richard Herman**
License Number of Plugging Operator:	**59385**
Plugging Method:	**Other plugging method.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **3 inches diameter, From 21 ft to .5 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 21 ft to 10 ft; Sack(s)/type of cement used: 2 Sand** 2nd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 2 Bentonite** 3rd Interval: **From 10 ft to 0 ft; Sack(s)/type of cement used: 1 Cement** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**ETTL Engineers & Consultants** **1717 East Erwin** **Tyler , TX 75702**

Plug Installer License Number:	**59385**
Licensed Plug Installer Signature:	**Richard Herman**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Sand to 10 FT. Then grout**

Please include the plugging report's tracking number (Tracking **#100665**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880