LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 7

2021

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

VOLUME 7

2021

A. Title: (Cont'd) Report – Appendix C and Appendix F to the Quarterly Evaluation Report, 4th Quarter (October-December) 2020, Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas, April 2021
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers
Date: April 7, 2021
Bate Stamp: 01018610 – 01020311

B. Title: Report – Level IV DoD Analytical to Quarterly Evaluation Report, 4th Quarter (October-December) 2020, Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas, April 2021
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers
Date: April 7, 2021
Bate Stamp: 01020312 – 01020565

2	TOC	0.4295	4.2954	12.35	25.33	12.99	50.24	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	k2009464-008 30x	2.8565 ppm	0.0759 ppm	2.6600%	2020/11/05 04:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.8028	28.0280	29.00	41.81	12.82	50.19	10:27
2	TOC	2.9101	29.1014	29.75	42.61	12.86	50.21	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	k2009464-009	21.6285 ppm	0.0728 ppm	0.3400%	2020/11/05 05:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.6800	216.7996	161.42	174.33	12.91	50.21	10:24
2	TOC	21.5770	215.7703	160.70	173.61	12.91	50.25	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	k2009464-010	22.1763 ppm	0.0093 ppm	0.0400%	2020/11/05 05:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.1698	221.6978	164.85	177.69	12.84	50.25	10:29
2	TOC	22.1829	221.8289	164.94	177.92	12.98	50.25	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	26.4083 ppm (PASS)	0.0000 ppm	0%	2020/11/05 06:15

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.4083	264.0834	195.14	207.97	12.83	50.24	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/05 06:30

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.45	22.29	12.85	50.22	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/05 06:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.86	21.70	12.84	50.28	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.5428 ppm (PASS)	0.0000 ppm	0%	2020/11/05 07:00

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.5428	235.4284	175.04	187.97	12.93	50.28	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	k2009464-012	17.9990 ppm	0.7135 ppm	3.9600%	2020/11/05 07:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	17.4945	174.9454	132.06	144.86	12.80	50.27	10:26
2	TOC	18.5035	185.0354	139.14	152.05	12.91	50.28	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	k2009464-013 10x	5.9533 ppm	0.3025 ppm	5.0800%	2020/11/05 07:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	6.1672	61.6724	52.60	65.74	13.14	50.26	10:31
2	TOC	5.7394	57.3944	49.60	62.67	13.07	50.23	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	k2009464-014	20.5525 ppm	0.4945 ppm	2.4100%	2020/11/05 08:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	20.2028	202.0280	151.06	164.02	12.96	50.24	10:27
2	TOC	20.9022	209.0218	155.96	169.02	13.06	50.24	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	k2009464-015	20.1349 ppm	0.2905 ppm	1.4400%	2020/11/05 08:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	20.3404	203.4037	152.02	164.84	12.82	50.22	10:27
2	TOC	19.9295	199.2952	149.14	162.21	13.07	50.19	10:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	k2009464-016	22.1393 ppm	1.0424 ppm	4.7100%	2020/11/05 09:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.8764	228.7642	169.81	182.87	13.06	50.17	10:29

2	TOC	21.4023	214.0226	159.47	172.25	12.78	50.18	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	k2009464-017	22.0654 ppm	0.1562 ppm	0.7100%	2020/11/05 09:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.1759	221.7591	164.90	177.77	12.87	50.22	10:28
2	TOC	21.9549	219.5495	163.35	176.25	12.90	50.17	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	k2009464-018	0.0391 ppm	0.0470 ppm	120.1900%	2020/11/05 10:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0723	0.7230	9.84	22.53	12.69	50.18	10:28
2	TOC	0.0059	0.0587	9.38	22.25	12.88	50.18	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	k2009464-019	0.3056 ppm	0.0396 ppm	12.9600%	2020/11/05 10:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2776	2.7758	11.28	24.17	12.88	50.23	10:28
2	TOC	0.3336	3.3360	11.68	24.43	12.76	50.24	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	k2009464-020	0.3028 ppm	0.0171 ppm	5.6600%	2020/11/05 10:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3149	3.1493	11.55	24.35	12.80	50.16	10:28
2	TOC	0.2907	2.9069	11.38	24.14	12.76	50.11	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	30	TOC	k2009464-021	22.7012 ppm	0.1392 ppm	0.6100%	2020/11/05 11:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.7996	227.9959	169.27	182.07	12.80	50.11	10:26
2	TOC	22.6027	226.0272	167.89	180.80	12.91	50.10	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	k2009464-022	23.0707 ppm	0.2972 ppm	1.2900%	2020/11/05 11:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	23.2809	232.8085	172.65	185.54	12.89	50.04	10:28
2	TOC	22.8606	228.6060	169.70	182.51	12.82	50.26	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	k2009464-023	0.3842 ppm	0.0500 ppm	13.0100%	2020/11/05 12:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4196	4.1956	12.28	25.08	12.80	50.18	10:29
2	TOC	0.3489	3.4885	11.78	24.57	12.78	50.18	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	26.1981 ppm (PASS)	0.0000 ppm	0%	2020/11/05 12:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.1981	261.9807	193.67	206.35	12.68	50.12	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

			Concentration			Min / Max				

	Pos	BAT	(ppm)	Dil	Sample ID	(% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/05 13:06

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.20	20.79	12.60	50.12	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	33	TOC	k2009464-024	0.0914 ppm	0.0536 ppm	58.6700%	2020/11/05 13:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1293	1.2932	10.24	23.18	12.93	50.34	10:28
2	TOC	0.0535	0.5348	9.71	22.61	12.90	50.36	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	34	TOC	k2009464-025	0.0828 ppm	0.0410 ppm	49.5600%	2020/11/05 13:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1118	1.1178	10.12	22.98	12.86	50.24	10:27
2	TOC	0.0538	0.5376	9.71	22.68	12.97	50.18	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	35	TOC	k2009472-001	2.0639 ppm	0.0213 ppm	1.0300%	2020/11/05 14:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0789	20.7890	23.92	36.74	12.82	50.15	10:31
2	TOC	2.0488	20.4882	23.71	36.37	12.66	50.12	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	36	TOC	k2009472-002	11.1714 ppm	0.2629 ppm	2.3500%	2020/11/05 14:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.9855	109.8547	86.40	99.19	12.80	50.24	10:28
2	TOC	11.3573	113.5725	89.00	101.66	12.66	50.20	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	k2009472-002dup	11.2032 ppm	0.0471 ppm	0.4200%	2020/11/05 15:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	11.2365	112.3651	88.16	100.86	12.70	50.14	10:29
2	TOC	11.1699	111.6993	87.69	100.57	12.88	50.12	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	k2009472-002ms	38.5097 ppm	0.3477 ppm	0.9000%	2020/11/05 15:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	38.7555	387.5551	281.20	294.00	12.80	50.17	10:28
2	TOC	38.2638	382.6383	277.75	290.77	13.02	50.23	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	K2009464-7 100X	2.1670 ppm	0.0192 ppm	0.8800%	2020/11/05 16:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1805	21.8055	24.63	37.47	12.84	50.20	10:29
2	TOC	2.1535	21.5346	24.44	37.12	12.68	50.27	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.7007 ppm	0.0000 ppm	0%	2020/11/05 16:37

							(PASS)				

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.7007	257.0070	190.18	203.07	12.89	50.23	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/05 16:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.18	21.05	12.87	50.19	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1471	4.5417	0.7860	0.0000	0.0000	0.0000	2020/11/03 13:23	Fusion1 (Fusion1)
v1472	2.1650	-0.0330	0.0000	0.0000	0.0000	2020/11/04 20:21	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v38	Calibration curve formula:	TOC: y = 7.015x + 9.892
Ver Creation:	2020/06/13 16:40	r^2 value:	TOC: r^2 = 0.99974
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25
50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version: v4 Operator: Fusion1 (Fusion1)

Ver Creation: 2019/02/21 17:57

Comment:

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/11/05 17:07

ALS Environmental

StarLIMS Run: 702236,702238

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-55J 50 ppm LCS: 19-GEN-8-41K 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-35-K

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-55I 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-55K

21 % H3PO4: 19-GEN-08-55L

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MAS	Date Analyzed: 11/4/2020
Reviewed By:	Date Reviewed: 11/5/20

October 26, 2020 Service Request No:E2001016

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20101139

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 22, 2020
For your reference, these analyses have been assigned our service request number **E2001016.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001016
Project:	HS20101139	**Date Received:**	10/22/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 10/22/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000533: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS/DLCS recoveries pass. MS/MSD was performed on an unrelated sample.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001016
Project: HS20101139

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001016-001	LH18/24-SP650_102120-AIX	10/21/2020	1400

Service Request Summary

Folder #: **E2001016**
Client Name: ALS Environmental - US
Project Name: HS20101139
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/22/20
Internal Due Date: 11/5/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20101139
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001016-001	LH18/24-SP650_102120-AIX	Ground Water	10/21/20 1400	**IV**

Service Request Summary

Folder #: **E2001016**
Client Name: ALS Environmental - US
Project Name: HS20101139
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/22/20
Internal Due Date: 11/5/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20101139
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 11/5,level IV 11/12

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

Chain of Custody

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14998**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20101139
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20101139-02**	**LH18/24-SP650_102120-AIX**	**Water**	**21 Oct 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			05 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 10/22/20 1645

Cooler ID(s): _____ Temperature(s): _____

Cooler Receipt Form

ALS Environmental

Project Chemist: CH

Client/Project: ALS-H

Thermometer ID: 1825

Date/Time Received: 10/22/20 Initials: CH

Date/Time Logged in: 10/22/20 Initials: CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ◉ Courier ○ Client

2. Samples received in: ◉ Cooler ○ Box ○ Envelope ○ Other _____

3. Were custody seals on coolers? ○ Yes ◉ No

Were they intact? ○ Yes ○ No ◉ N/A

Were they signed and dated? ○ Yes ○ No ◉ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ◉ Baggies ○ Bubble Wrap ○ Gel Packs ◉ Wet Ice ○ Sleeves ○ Other _____

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling: _____

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
—		10/22/20	1645	CH	3.3	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ◉ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ◉ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ◉ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ◉ Yes ○ No

10. Did sample labels and tags agree with custody documents? ◉ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

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10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 368381 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/23/20 14:19

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001014-001	16WW44-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2001014-002	16WW37-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2001014-003	16WW38-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2001014-004	16WW14-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001014-005	16WW34-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001014-006	16WW34-201019-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001014-007	16WW33-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001014-008	16WW32-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001014-009	16WW31-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001014-010	16WW46-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001015-001	16EW01-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001015-002	16WW49-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001015-003	16WW48-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001015-004	16WW51-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001015-005	16EW08-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001015-006	16EW04-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001015-007	16RW01-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001016-001	LH18/24-SP650_102120-AIX	.01	6850/ClO4 DOD			Ground Water	10mL	
19	EQ2000533-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000533-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000533-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000533-04	16WW48-201020 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000533-05	16WW48-201020 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000533-02	1.00µL	EQ2000533-03	1.00µL	EQ2000533-04	1.00µL	EQ2000533-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001014-001	100.00µL	E2001014-002	100.00µL	E2001014-003	100.00µL	E2001014-004	100.00µL	E2001014-005	100.00µL	E2001014-006	100.00µL
E2001014-007	100.00µL	E2001014-008	100.00µL	E2001014-009	100.00µL	E2001014-010	100.00µL	E2001015-001	100.00µL	E2001015-002	100.00µL
E2001015-003	100.00µL	E2001015-004	100.00µL	E2001015-005	100.00µL	E2001015-006	100.00µL	E2001015-007	100.00µL	E2001016-001	100.00µL
EQ2000533-01	100.00µL	EQ2000533-02	100.00µL	EQ2000533-03	100.00µL	EQ2000533-04	100.00µL	EQ2000533-05	100.00µL		

Preparation Information Benchsheet

Prep Run#: 368381 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/23/20 14:19

Preparation Steps

Step: Preparation
Started: 10/23/20 14:19
Finished: 10/23/20 15:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 10/26/2020

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

ALS Environmental - Houston HRMS
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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	10/21/20 1400
Sample Matrix:	Ground Water	**Date Received:**	10/22/20
Sample Name:	LH18/24-SP650_102120-AIX	**Units:**	µg/L
Lab Code:	E2001016-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	10/23/20	10/23/20 22:07	368381	700781	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000533-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	10/23/20	10/26/20 11:06	368381	700826	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20101139
Sample Matrix: Ground Water

Service Request: E2001016
Date Analyzed: 10/26/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 368381

	Lab Control Sample EQ2000533-02			Duplicate Lab Control Sample EQ2000533-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.106	0.100	106	0.110	0.100	110	84 - 119	4	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000533-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.106**		0.100	0.0500	0.0250	1	10/23/20	10/26/20 11:13	368381	700826	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000533-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.110**		0.100	0.0500	0.0250	1	10/23/20	10/26/20 11:21	368381	700826	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
		Date Analyzed:	10/26/20

Matrix Spike Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2001015-003	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS				Batch QCDMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2000533-04				EQ2000533-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	167	167	0.100	151	#	167	0.100	249	#	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000533-04	**Basis:**	NA
Run Type:	Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**167**		1.00	0.500	0.250	10	10/23/20	10/26/20 12:16	368381	700826	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000533-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**167**		1.00	0.500	0.250	10	10/23/20	10/26/20 12:24	368381	700826	

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November 04, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20101149**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Oct 22, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20101149

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20101149-01	LH18/24-SP650_102120	Water		21-Oct-2020 14:00	22-Oct-2020 09:10	☐
HS20101149-02	Trip Blank	Water		21-Oct-2020 00:00	22-Oct-2020 09:10	☐

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20101149

GCMS Volatiles by Method SW8260

Batch ID: R371935

Sample ID: VLCSW-201103

- 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene and Naphthalene exceeded QC limits for LCS. Samples are ND for these compounds.

Sample ID: HS20101123-01MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SW9056

Batch ID: R371570

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20101149
Sample ID: LH18/24-SP650_102120 Lab ID:HS20101149-01
Collection Date: 21-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	03-Nov-2020 19:00
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	03-Nov-2020 19:00
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	03-Nov-2020 19:00
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	03-Nov-2020 19:00
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	03-Nov-2020 19:00
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20101149
Sample ID: LH18/24-SP650_102120 Lab ID:HS20101149-01
Collection Date: 21-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
cis-1,2-Dichloroethene	**13**		**0.20**	**0.50**	**1.0**	**UG/L**	1	03-Nov-2020 19:00
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	03-Nov-2020 19:00
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	03-Nov-2020 19:00
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Trichloroethene	**2.2**		**0.20**	**0.50**	**1.0**	**UG/L**	1	03-Nov-2020 19:00
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Surr: 1,2-Dichloroethane-d4	*87.2*			**0**	*81-118*	*%REC*	*1*	*03-Nov-2020 19:00*
Surr: 4-Bromofluorobenzene	*91.2*			**0**	*85-114*	*%REC*	*1*	*03-Nov-2020 19:00*
Surr: Dibromofluoromethane	*85.8*			**0**	*80-119*	*%REC*	*1*	*03-Nov-2020 19:00*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*03-Nov-2020 19:00*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**561**		**4.00**	**10.0**	**10.0**	**mg/L**	20	29-Oct-2020 08:09
Sulfate	**32.2**		**0.200**	**0.500**	**0.500**	**mg/L**	1	29-Oct-2020 09:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20101149
Sample ID: Trip Blank
Lab ID:HS20101149-02
Collection Date: 21-Oct-2020 00:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	03-Nov-2020 18:39
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	03-Nov-2020 18:39
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	03-Nov-2020 18:39
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	03-Nov-2020 18:39
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	03-Nov-2020 18:39
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20101149
Sample ID: Trip Blank Lab ID:HS20101149-02
Collection Date: 21-Oct-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	03-Nov-2020 18:39
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	03-Nov-2020 18:39
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Surr: 1,2-Dichloroethane-d4	*85.1*			**0**	*81-118*	*%REC*	*1*	*03-Nov-2020 18:39*
Surr: 4-Bromofluorobenzene	*92.7*			**0**	*85-114*	*%REC*	*1*	*03-Nov-2020 18:39*
Surr: Dibromofluoromethane	*84.7*			**0**	*80-119*	*%REC*	*1*	*03-Nov-2020 18:39*
Surr: Toluene-d8	*99.0*			**0**	*89-112*	*%REC*	*1*	*03-Nov-2020 18:39*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R371570 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20101149-01	LH18/24-SP650_102120	21 Oct 2020 14:00			29 Oct 2020 09:03	1
HS20101149-01	LH18/24-SP650_102120	21 Oct 2020 14:00			29 Oct 2020 08:09	20
Batch ID: R371935 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20101149-01	LH18/24-SP650_102120	21 Oct 2020 14:00			03 Nov 2020 19:00	1
HS20101149-02	Trip Blank	21 Oct 2020 00:00			03 Nov 2020 18:39	1

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201103** Units: **UG/L** Analysis Date: **03-Nov-2020 18:18**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815257** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201103** Units: **UG/L** Analysis Date: **03-Nov-2020 18:18**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815257** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.1*	*1.0*	*50*	*0*	*86.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.11*	*1.0*	*50*	*0*	*90.2*	*85 - 114*				
Surr: Dibromofluoromethane	*41.82*	*1.0*	*50*	*0*	*83.6*	*80 - 119*				
Surr: Toluene-d8	*50.18*	*1.0*	*50*	*0*	*100*	*89 - 112*				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201103** Units: **UG/L** Analysis Date: **03-Nov-2020 17:15**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815256** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.38	1.0	20	0	91.9	78 - 124				
1,1,1-Trichloroethane	18.61	1.0	20	0	93.0	74 - 131				
1,1,2,2-Tetrachloroethane	20.9	1.0	20	0	105	71 - 121				
1,1,2-Trichloroethane	19.19	1.0	20	0	96.0	80 - 119				
1,1-Dichloroethane	17.82	1.0	20	0	89.1	77 - 125				
1,1-Dichloroethene	19.03	1.0	20	0	95.2	71 - 131				
1,1-Dichloropropene	19.59	1.0	20	0	97.9	78 - 125				
1,2,3-Trichlorobenzene	28.1	1.0	20	0	140	69 - 129				S
1,2,3-Trichloropropane	20.62	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	26.13	1.0	20	0	131	69 - 130				S
1,2,4-Trimethylbenzene	20.64	1.0	20	0	103	76 - 124				
1,2-Dibromo-3-chloropropane	21.21	1.0	20	0	106	62 - 128				
1,2-Dibromoethane	18.84	1.0	20	0	94.2	77 - 121				
1,2-Dichlorobenzene	19.66	1.0	20	0	98.3	80 - 119				
1,2-Dichloroethane	19.48	1.0	20	0	97.4	73 - 128				
1,2-Dichloropropane	18.45	1.0	20	0	92.2	78 - 122				
1,3,5-Trimethylbenzene	19.52	1.0	20	0	97.6	75 - 124				
1,3-Dichlorobenzene	19.85	1.0	20	0	99.2	80 - 119				
1,3-Dichloropropane	19.32	1.0	20	0	96.6	80 - 119				
1,4-Dichlorobenzene	19.71	1.0	20	0	98.5	79 - 118				
2,2-Dichloropropane	18.55	1.0	20	0	92.8	60 - 139				
2-Butanone	37.33	2.0	40	0	93.3	56 - 143				
2-Chlorotoluene	19.9	1.0	20	0	99.5	79 - 122				
2-Hexanone	39.09	2.0	40	0	97.7	57 - 139				
4-Chlorotoluene	18.8	1.0	20	0	94.0	78 - 122				
4-Isopropyltoluene	20.46	1.0	20	0	102	77 - 127				
4-Methyl-2-pentanone	38.31	2.0	40	0	95.8	67 - 130				
Acetone	46.14	2.0	40	0	115	39 - 160				
Benzene	18.89	1.0	20	0	94.5	79 - 120				
Bromobenzene	19.83	1.0	20	0	99.1	80 - 120				
Bromochloromethane	19.34	1.0	20	0	96.7	78 - 123				
Bromodichloromethane	19.03	1.0	20	0	95.1	79 - 125				
Bromoform	19.02	1.0	20	0	95.1	66 - 130				
Bromomethane	19.16	1.0	20	0	95.8	53 - 141				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201103** Units: **UG/L** Analysis Date: **03-Nov-2020 17:15**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815256** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.87	2.0	40	0	94.7	64 - 133				
Carbon tetrachloride	18.8	1.0	20	0	94.0	72 - 136				
Chlorobenzene	18.1	1.0	20	0	90.5	82 - 118				
Chloroethane	16.37	1.0	20	0	81.8	60 - 138				
Chloroform	18.31	1.0	20	0	91.5	79 - 124				
Chloromethane	19.66	1.0	20	0	98.3	50 - 139				
cis-1,2-Dichloroethene	17.85	1.0	20	0	89.3	78 - 123				
cis-1,3-Dichloropropene	19.63	1.0	20	0	98.1	75 - 124				
Dibromochloromethane	20.06	1.0	20	0	100	74 - 126				
Dibromomethane	19.38	1.0	20	0	96.9	79 - 123				
Dichlorodifluoromethane	19.09	1.0	20	0	95.4	32 - 152				
Ethylbenzene	18.9	1.0	20	0	94.5	79 - 121				
Hexachlorobutadiene	23.47	1.0	20	0	117	66 - 134				
Isopropylbenzene	19.75	1.0	20	0	98.8	72 - 131				
m,p-Xylene	37.82	2.0	40	0	94.6	80 - 121				
Methylene chloride	17.33	2.0	20	0	86.6	74 - 124				
Naphthalene	26.72	1.0	20	0	134	61 - 128				S
n-Butylbenzene	20.8	1.0	20	0	104	75 - 128				
n-Propylbenzene	21.05	1.0	20	0	105	76 - 126				
o-Xylene	18.24	1.0	20	0	91.2	78 - 122				
sec-Butylbenzene	20.87	1.0	20	0	104	77 - 126				
Styrene	19.28	1.0	20	0	96.4	78 - 123				
tert-Butylbenzene	21.08	1.0	20	0	105	78 - 124				
Tetrachloroethene	18.79	1.0	20	0	94.0	74 - 129				
Toluene	18.18	1.0	20	0	90.9	80 - 121				
trans-1,2-Dichloroethene	18.4	1.0	20	0	92.0	75 - 124				
trans-1,3-Dichloropropene	20.98	1.0	20	0	105	73 - 127				
Trichloroethene	19.91	1.0	20	0	99.6	79 - 123				
Trichlorofluoromethane	18.33	1.0	20	0	91.6	65 - 141				
Vinyl chloride	19.48	1.0	20	0	97.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.1*	*1.0*	*50*	*0*	*100*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.89*	*1.0*	*50*	*0*	*99.8*	*85 - 114*				
Surr: Dibromofluoromethane	*47.06*	*1.0*	*50*	*0*	*94.1*	*80 - 119*				
Surr: Toluene-d8	*47.74*	*1.0*	*50*	*0*	*95.5*	*89 - 112*				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20101123-01MS** Units: **UG/L** Analysis Date: **03-Nov-2020 20:04**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815262** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	23.2	1.0	20	0	116	78 - 124				
1,1,1-Trichloroethane	23.48	1.0	20	0	117	74 - 131				
1,1,2,2-Tetrachloroethane	25.98	1.0	20	0	130	71 - 121				S
1,1,2-Trichloroethane	25.37	1.0	20	0	127	80 - 119				S
1,1-Dichloroethane	20.54	1.0	20	0	103	77 - 125				
1,1-Dichloroethene	24.98	1.0	20	1.516	117	71 - 131				
1,1-Dichloropropene	25	1.0	20	0	125	78 - 125				S
1,2,3-Trichlorobenzene	21.88	1.0	20	0	109	69 - 129				
1,2,3-Trichloropropane	25.23	1.0	20	0	126	73 - 122				S
1,2,4-Trichlorobenzene	24.56	1.0	20	0	123	69 - 130				
1,2,4-Trimethylbenzene	26.89	1.0	20	0	134	76 - 124				S
1,2-Dibromo-3-chloropropane	21.24	1.0	20	0	106	62 - 128				
1,2-Dibromoethane	23.19	1.0	20	0	116	77 - 121				
1,2-Dichlorobenzene	23.79	1.0	20	0	119	80 - 119				
1,2-Dichloroethane	24.02	1.0	20	0.663	117	73 - 128				
1,2-Dichloropropane	23.71	1.0	20	0	119	78 - 122				
1,3,5-Trimethylbenzene	25.73	1.0	20	0	129	75 - 124				S
1,3-Dichlorobenzene	24.69	1.0	20	0	123	80 - 119				S
1,3-Dichloropropane	23.46	1.0	20	0	117	80 - 119				
1,4-Dichlorobenzene	24.03	1.0	20	0	120	79 - 118				S
2,2-Dichloropropane	22.82	1.0	20	0	114	60 - 139				
2-Butanone	34.05	2.0	40	0	85.1	56 - 143				
2-Chlorotoluene	26.28	1.0	20	0	131	79 - 122				S
2-Hexanone	44.99	2.0	40	0	112	57 - 139				
4-Chlorotoluene	24.34	1.0	20	0	122	78 - 122				
4-Isopropyltoluene	27.72	1.0	20	0	139	77 - 127				S
4-Methyl-2-pentanone	45.81	2.0	40	0	115	67 - 130				
Acetone	34.43	2.0	40	0	86.1	39 - 160				
Benzene	23.21	1.0	20	0	116	79 - 120				
Bromobenzene	25.09	1.0	20	0	125	80 - 120				S
Bromochloromethane	20.48	1.0	20	0	102	78 - 123				
Bromodichloromethane	23.31	1.0	20	0	117	79 - 125				
Bromoform	21.49	1.0	20	0	107	66 - 130				
Bromomethane	20.6	1.0	20	0	103	53 - 141				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20101123-01MS** Units: **UG/L** Analysis Date: **03-Nov-2020 20:04**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815262** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	43.68	2.0	40	0	109	64 - 133				
Carbon tetrachloride	25.28	1.0	20	0	126	72 - 136				
Chlorobenzene	22.32	1.0	20	0	112	82 - 118				
Chloroethane	21.17	1.0	20	0	106	60 - 138				
Chloroform	20.88	1.0	20	0	104	79 - 124				
Chloromethane	23.89	1.0	20	0	119	50 - 139				
cis-1,2-Dichloroethene	71.36	1.0	20	19.57	259	78 - 123				S
cis-1,3-Dichloropropene	23.93	1.0	20	0	120	75 - 124				
Dibromochloromethane	23.56	1.0	20	0	118	74 - 126				
Dibromomethane	23.79	1.0	20	0	119	79 - 123				
Dichlorodifluoromethane	24.98	1.0	20	0	125	32 - 152				
Ethylbenzene	24.14	1.0	20	0	121	79 - 121				
Hexachlorobutadiene	26.54	1.0	20	0	133	66 - 134				
Isopropylbenzene	25.24	1.0	20	0	126	72 - 131				
m,p-Xylene	47.98	2.0	40	0	120	80 - 121				
Methylene chloride	20.14	2.0	20	0	101	74 - 124				
Naphthalene	20.69	1.0	20	0	103	61 - 128				
n-Butylbenzene	25.85	1.0	20	0	129	75 - 128				S
n-Propylbenzene	28.42	1.0	20	0	142	76 - 126				S
o-Xylene	23.59	1.0	20	0	118	78 - 122				
sec-Butylbenzene	27.37	1.0	20	0	137	77 - 126				S
Styrene	23.08	1.0	20	0	115	78 - 123				
tert-Butylbenzene	27.94	1.0	20	0	140	78 - 124				S
Tetrachloroethene	26.43	1.0	20	0	132	74 - 129				S
Toluene	22.2	1.0	20	0	111	80 - 121				
trans-1,2-Dichloroethene	22.22	1.0	20	0	111	75 - 124				
trans-1,3-Dichloropropene	24.22	1.0	20	0	121	73 - 127				
Trichloroethene	405	1.0	20	216.9	940	79 - 123				SEO
Trichlorofluoromethane	21.82	1.0	20	0	109	65 - 141				
Vinyl chloride	29.58	1.0	20	2.82	134	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.67*	*1.0*	*50*	*0*	*91.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.28*	*1.0*	*50*	*0*	*94.6*	*85 - 114*				
Surr: Dibromofluoromethane	*44.14*	*1.0*	*50*	*0*	*88.3*	*80 - 119*				
Surr: Toluene-d8	*50.31*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20101123-01MSD** Units: **UG/L** Analysis Date: **03-Nov-2020 20:25**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815263** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	23.13	1.0	20	0	116	78 - 124	23.2	0.319	20	
1,1,1-Trichloroethane	23.25	1.0	20	0	116	74 - 131	23.48	1	20	
1,1,2,2-Tetrachloroethane	28.09	1.0	20	0	140	71 - 121	25.98	7.81	20	S
1,1,2-Trichloroethane	23.7	1.0	20	0	118	80 - 119	25.37	6.84	20	
1,1-Dichloroethane	21.29	1.0	20	0	106	77 - 125	20.54	3.56	20	
1,1-Dichloroethene	23.91	1.0	20	1.516	112	71 - 131	24.98	4.4	20	
1,1-Dichloropropene	24.37	1.0	20	0	122	78 - 125	25	2.56	20	
1,2,3-Trichlorobenzene	22.98	1.0	20	0	115	69 - 129	21.88	4.91	20	
1,2,3-Trichloropropane	26.88	1.0	20	0	134	73 - 122	25.23	6.33	20	S
1,2,4-Trichlorobenzene	23.64	1.0	20	0	118	69 - 130	24.56	3.79	20	
1,2,4-Trimethylbenzene	26.66	1.0	20	0	133	76 - 124	26.89	0.85	20	S
1,2-Dibromo-3-chloropropane	24.5	1.0	20	0	122	62 - 128	21.24	14.2	20	
1,2-Dibromoethane	23.91	1.0	20	0	120	77 - 121	23.19	3.03	20	
1,2-Dichlorobenzene	24.47	1.0	20	0	122	80 - 119	23.79	2.81	20	S
1,2-Dichloroethane	24.09	1.0	20	0.663	117	73 - 128	24.02	0.278	20	
1,2-Dichloropropane	22.73	1.0	20	0	114	78 - 122	23.71	4.21	20	
1,3,5-Trimethylbenzene	25.99	1.0	20	0	130	75 - 124	25.73	0.986	20	S
1,3-Dichlorobenzene	25.97	1.0	20	0	130	80 - 119	24.69	5.04	20	S
1,3-Dichloropropane	23.91	1.0	20	0	120	80 - 119	23.46	1.92	20	S
1,4-Dichlorobenzene	25.47	1.0	20	0	127	79 - 118	24.03	5.8	20	S
2,2-Dichloropropane	21.69	1.0	20	0	108	60 - 139	22.82	5.08	20	
2-Butanone	35.38	2.0	40	0	88.5	56 - 143	34.05	3.83	20	
2-Chlorotoluene	26.03	1.0	20	0	130	79 - 122	26.28	0.95	20	S
2-Hexanone	43.4	2.0	40	0	109	57 - 139	44.99	3.6	20	
4-Chlorotoluene	24.57	1.0	20	0	123	78 - 122	24.34	0.969	20	S
4-Isopropyltoluene	27.1	1.0	20	0	136	77 - 127	27.72	2.27	20	S
4-Methyl-2-pentanone	43.75	2.0	40	0	109	67 - 130	45.81	4.61	20	
Acetone	37.54	2.0	40	0	93.8	39 - 160	34.43	8.63	20	
Benzene	23.58	1.0	20	0	118	79 - 120	23.21	1.56	20	
Bromobenzene	25.66	1.0	20	0	128	80 - 120	25.09	2.27	20	S
Bromochloromethane	21.7	1.0	20	0	109	78 - 123	20.48	5.8	20	
Bromodichloromethane	23.27	1.0	20	0	116	79 - 125	23.31	0.187	20	
Bromoform	21.9	1.0	20	0	109	66 - 130	21.49	1.89	20	
Bromomethane	21.17	1.0	20	0	106	53 - 141	20.6	2.7	20	

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20101123-01MSD** Units: **UG/L** Analysis Date: **03-Nov-2020 20:25**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815263** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	44.02	2.0	40	0	110	64 - 133	43.68	0.776	20	
Carbon tetrachloride	24.23	1.0	20	0	121	72 - 136	25.28	4.23	20	
Chlorobenzene	22.17	1.0	20	0	111	82 - 118	22.32	0.662	20	
Chloroethane	20.84	1.0	20	0	104	60 - 138	21.17	1.57	20	
Chloroform	21.45	1.0	20	0	107	79 - 124	20.88	2.66	20	
Chloromethane	23.72	1.0	20	0	119	50 - 139	23.89	0.727	20	
cis-1,2-Dichloroethene	72.84	1.0	20	19.57	266	78 - 123	71.36	2.06	20	S
cis-1,3-Dichloropropene	23.48	1.0	20	0	117	75 - 124	23.93	1.91	20	
Dibromochloromethane	24.12	1.0	20	0	121	74 - 126	23.56	2.36	20	
Dibromomethane	23.96	1.0	20	0	120	79 - 123	23.79	0.732	20	
Dichlorodifluoromethane	23.7	1.0	20	0	118	32 - 152	24.98	5.27	20	
Ethylbenzene	23.77	1.0	20	0	119	79 - 121	24.14	1.54	20	
Hexachlorobutadiene	28.43	1.0	20	0	142	66 - 134	26.54	6.88	20	S
Isopropylbenzene	24.54	1.0	20	0	123	72 - 131	25.24	2.85	20	
m,p-Xylene	48.87	2.0	40	0	122	80 - 121	47.98	1.84	20	S
Methylene chloride	20.25	2.0	20	0	101	74 - 124	20.14	0.534	20	
Naphthalene	24.29	1.0	20	0	121	61 - 128	20.69	16	20	
n-Butylbenzene	25.95	1.0	20	0	130	75 - 128	25.85	0.381	20	S
n-Propylbenzene	29.07	1.0	20	0	145	76 - 126	28.42	2.26	20	S
o-Xylene	23.63	1.0	20	0	118	78 - 122	23.59	0.17	20	
sec-Butylbenzene	27.64	1.0	20	0	138	77 - 126	27.37	1.01	20	S
Styrene	23.74	1.0	20	0	119	78 - 123	23.08	2.79	20	
tert-Butylbenzene	27.97	1.0	20	0	140	78 - 124	27.94	0.0976	20	S
Tetrachloroethene	25.05	1.0	20	0	125	74 - 129	26.43	5.35	20	
Toluene	21.61	1.0	20	0	108	80 - 121	22.2	2.72	20	
trans-1,2-Dichloroethene	22.01	1.0	20	0	110	75 - 124	22.22	0.958	20	
trans-1,3-Dichloropropene	24.14	1.0	20	0	121	73 - 127	24.22	0.324	20	
Trichloroethene	383.9	1.0	20	216.9	835	79 - 123	405	5.36	20	SEO
Trichlorofluoromethane	22.41	1.0	20	0	112	65 - 141	21.82	2.69	20	
Vinyl chloride	29.23	1.0	20	2.82	132	58 - 137	29.58	1.19	20	
Surr: 1,2-Dichloroethane-d4	*45.21*	*1.0*	*50*	*0*	*90.4*	*81 - 118*	*45.67*	*1.01*	*20*	
Surr: 4-Bromofluorobenzene	*47.96*	*1.0*	*50*	*0*	*95.9*	*85 - 114*	*47.28*	*1.43*	*20*	
Surr: Dibromofluoromethane	*45.21*	*1.0*	*50*	*0*	*90.4*	*80 - 119*	*44.14*	*2.39*	*20*	
Surr: Toluene-d8	*49.84*	*1.0*	*50*	*0*	*99.7*	*89 - 112*	*50.31*	*0.939*	*20*	

ALS Houston, US Date: 04-Nov-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20101149

QC BATCH REPORT

Batch ID:	**R371935 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch:	HS20101149-01	HS20101149-02

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371570 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-102820** Units: **mg/L** Analysis Date: **28-Oct-2020 11:27**
Client ID: Run ID: **ICS-Integrion_371570** SeqNo: **5806771** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-102820** Units: **mg/L** Analysis Date: **28-Oct-2020 11:45**
Client ID: Run ID: **ICS-Integrion_371570** SeqNo: **5806772** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.4	0.500	20	0	97.0	80 - 120				
Sulfate	18.62	0.500	20	0	93.1	80 - 120				

MS Sample ID: **HS20100780-04MS** Units: **mg/L** Analysis Date: **29-Oct-2020 07:15**
Client ID: Run ID: **ICS-Integrion_371570** SeqNo: **5806778** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	247.9	5.00	100	153.2	94.8	80 - 120				
Sulfate	104.2	5.00	100	18.29	85.9	80 - 120				

MSD Sample ID: **HS20100780-04MSD** Units: **mg/L** Analysis Date: **29-Oct-2020 07:33**
Client ID: Run ID: **ICS-Integrion_371570** SeqNo: **5806779** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	246.3	5.00	100	153.2	93.1	80 - 120	247.9	0.66	20	
Sulfate	104.6	5.00	100	18.29	86.3	80 - 120	104.2	0.407	20	

The following samples were analyzed in this batch: HS20101149-01

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20101149**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20101149

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20101149-01	LH18/24-SP650_102120	Login	10/22/2020 3:25:33 PM	PMG	Disposed
HS20101149-01	LH18/24-SP650_102120	Login	10/22/2020 3:25:33 PM	PMG	VOA081
HS20101149-02	Trip Blank	Login	10/22/2020 3:25:33 PM	PMG	VOA081

ALS Houston, US Date: 04-Nov-20

Sample Receipt Checklist

Work Order ID: HS20101149 **Date/Time Received:** 22-Oct-2020 09:10

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By: /S/ Paresh M. Giga (eSignature) 22-Oct-2020 15:27 (Date/Time) **Reviewed by:** /S/ RJ Modashia (eSignature) 22-Oct-2020 20:27 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.7C U/C	IR31	
Cooler(s)/Kit(s):	43886		
Date/Time sample(s) sent to storage:	10/22/2020 15:35		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT
BI-WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O Number

HS20101149
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_102120	Water	10/21/20 / 14:00		3	3		HCL	
LH18/24-SP650_102120	Water	10/21/20 / 14:00		1		1	NONE	
Trip Blank	Water	10/21/20		2	2		HCL	

Additional Remarks: **Standard TAT on other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	10/21/20	14:30									

9For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mercer	10/22/20	09:10							

Remarks
Cooler 43886 1N31
Temp 1.7°C CFO

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

43886

CUSTODY SEAL	Seal Broken By:
Date: 10/21/20 Time: 1430	
Name: Scott Beesinger	Date: 10/22/20
Company: BHATE	

43886 OCT 2 2 '20



Must Deliver Next Business Day
Time and Tempature Sensitive!

43886

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1209-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 08SEP20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: ADDITIONAL BOTTLES - BO 73689 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1566

THU - 22 OCT 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

*4475972 10/21 5GBJ2/A27E/B766

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 12, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20101403**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Oct 28, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101403

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20101403-01	LH18/24-SP650_102720	Water		27-Oct-2020 14:00	28-Oct-2020 09:15	☐
HS20101403-02	LH18/24-SP650_102720-AIX	Water		27-Oct-2020 14:00	28-Oct-2020 09:15	☐
HS20101403-03	LH18/24-SP650_102720-Between	Water		27-Oct-2020 14:00	28-Oct-2020 09:15	☐

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101403

Work Order Comments

• The analysis for Perchlorate was subcontracted to our ALS Houston TX, High Resolution Lab. Final report attached.

Work Order Comments

• The analyses for TOC was subcontracted to ALS Environmental in Kelso, WA. Final Report attached.

WetChemistry by Method E350.3

Batch ID: R371882

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R371548

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US

Date: 12-Nov-20

ANALYTICAL REPORT

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Sample ID: LH18/24-SP650_102720
Collection Date: 27-Oct-2020 14:00

WorkOrder:HS20101403
Lab ID:HS20101403-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: YP
Nitrogen, Ammonia (As N)	**12**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	03-Nov-2020 09:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.93**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	28-Oct-2020 11:00
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	12-Nov-2020 14:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.

ANALYTICAL REPORT

Project: Longhorn GW Treatment Plant Weekly Samples

WorkOrder:HS20101403

Sample ID: LH18/24-SP650_102720-AIX

Lab ID:HS20101403-02

Collection Date: 27-Oct-2020 14:00

Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	06-Nov-2020 14:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.

ANALYTICAL REPORT

Project: Longhorn GW Treatment Plant Weekly Samples

WorkOrder:HS20101403

Sample ID: LH18/24-SP650_102720-Between

Lab ID:HS20101403-03

Collection Date: 27-Oct-2020 14:00

Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	06-Nov-2020 14:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101403

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R371548 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20101403-01	LH18/24-SP650_102720	27 Oct 2020 14:00			28 Oct 2020 11:00	10
Batch ID: R371882 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20101403-01	LH18/24-SP650_102720	27 Oct 2020 14:00			03 Nov 2020 09:00	1
Batch ID: R372138 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20101403-02	LH18/24-SP650_102720-AIX	27 Oct 2020 14:00			06 Nov 2020 14:07	1
HS20101403-03	LH18/24-SP650_102720-Between	27 Oct 2020 14:00			06 Nov 2020 14:07	1
Batch ID: R372496 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20101403-01	LH18/24-SP650_102720	27 Oct 2020 14:00			12 Nov 2020 14:11	1

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101403

QC BATCH REPORT

Batch ID: R371548 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-371548** Units: **mg/L** Analysis Date: **28-Oct-2020 11:00**
Client ID: Run ID: **UV-2450_371548** SeqNo: **5806369** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-371548** Units: **mg/L** Analysis Date: **28-Oct-2020 11:00**
Client ID: Run ID: **UV-2450_371548** SeqNo: **5806370** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.258	0.0250	0.25	0	103	85 - 115				

MS Sample ID: **HS20101395-05MS** Units: **mg/L** Analysis Date: **28-Oct-2020 11:00**
Client ID: Run ID: **UV-2450_371548** SeqNo: **5806399** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.418	0.0250	0.25	0.148	108	80 - 120				

MSD Sample ID: **HS20101395-05MSD** Units: **mg/L** Analysis Date: **28-Oct-2020 11:00**
Client ID: Run ID: **UV-2450_371548** SeqNo: **5806400** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.419	0.0250	0.25	0.148	108	80 - 120	0.418	0.239	20	

The following samples were analyzed in this batch: HS20101403-01

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101403

QC BATCH REPORT

Batch ID: R371882 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R371882** Units: **mg/L** Analysis Date: **03-Nov-2020 09:00**
Client ID: Run ID: **WetChem_HS_371882** SeqNo: **5814054** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-R371882** Units: **mg/L** Analysis Date: **03-Nov-2020 09:00**
Client ID: Run ID: **WetChem_HS_371882** SeqNo: **5814053** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.23	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20101480-02MS** Units: **mg/L** Analysis Date: **03-Nov-2020 09:00**
Client ID: Run ID: **WetChem_HS_371882** SeqNo: **5814056** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	35.17	0.20	10	24.5	107	80 - 120				

MSD Sample ID: **HS20101480-02MSD** Units: **mg/L** Analysis Date: **03-Nov-2020 09:00**
Client ID: Run ID: **WetChem_HS_371882** SeqNo: **5814055** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	35.25	0.20	10	24.5	107	80 - 120	35.17	0.207	20	

The following samples were analyzed in this batch: HS20101403-01

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20101403**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

ALS Houston, US Date: 12-Nov-20

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101403

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20101403-01	LH18/24-SP650_102720	Login	10/28/2020 12:28:58 PM	PMG	WET262
HS20101403-01	LH18/24-SP650_102720	Login	10/28/2020 12:28:58 PM	PMG	WET262
HS20101403-01	LH18/24-SP650_102720	Login	10/28/2020 12:28:58 PM	PMG	Sub
HS20101403-02	LH18/24-SP650_102720-AIX	Login	10/28/2020 12:28:58 PM	PMG	Sub

ALS Houston, US Date: 12-Nov-20

Sample Receipt Checklist

Work Order ID: HS20101403 **Date/Time Received:** **28-Oct-2020 09:15**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	28-Oct-2020 12:31	**Reviewed by:**	/S/ RJ Modashia	28-Oct-2020 15:26
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑	
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑	
Chain of custody present?	Yes ☑	No ☐	1 Page(s)	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None	
Samplers name present on COC?	Yes ☐	No ☑		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

Temperature(s)/Thermometer(s):	1.3C U/c	IR31
Cooler(s)/Kit(s):	25172	
Date/Time sample(s) sent to storage:	10/28/2020 12:40	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Page 1 of 1

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20101403
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_102720	Water	10/27/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_102720	Water	10/27/20 / 14:00		1			X		NONE	
LH18/24-SP650_102720_AIX	Water	10/27/20 / 14:00		1				X	NONE	
LH18/24-SP650_102720_Between	Water	10/27/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	10/27/20	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mascorro	10/28/20	09:15							

Remarks: Cooler 25172 1131
Temp 1.3°C CFO

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

01018686

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

25172

CUSTODY SEAL

Date: 10/27/20 Time: 1430
Name: Scott Beesinger
Company: Bhate

Seal Broken By: SM
Date: 10/28/20

25172 OCT 2 8 2020

08 Z4
917 R1

Must Deliver Next Business Day
Time and Tempature Sensitive!

25172

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09SEP20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
ADDITIONAL BOTTLES - BO 73689 - RJ

HMA:

Express

E

FedEx
TRK# 0221 1891 8880 1500

WED - 28 OCT 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

#475872 10/27 5GBJ2/A27E/B7G6

November 06, 2020 Service Request No:E2001050

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20101403

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 28, 2020
For your reference, these analyses have been assigned our service request number **E2001050.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001050
Project:	HS20101403	**Date Received:**	10/28/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two samples were received for analysis at ALS Environmental in Houston on 10/28/20.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000557: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS & LCSD recoveries are within QC limits. The MS/MSD was performed on an unrelated sample.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001050
Project: HS20101403

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001050-001	LH18/24-SP650_102720-AIX	10/27/2020	1400
E2001050-002	LH18/24-SP650_102720-Between	10/27/2020	1400

Service Request Summary

Folder #: **E2001050**
Client Name: ALS Environmental - US
Project Name: HS20101403
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/28/20
Internal Due Date: 11/11/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20101403
EDD: No EDD Specified

2 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001050-001	LH18/24-SP650_102720-AIX	Water	10/27/20 1400	**IV**
E2001050-002	LH18/24-SP650_102720-Between	Water	10/27/20 1400	**IV**

Service Request Summary

Folder #: **E2001050**
Client Name: ALS Environmental - US
Project Name: HS20101403
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/28/20
Internal Due Date: 11/11/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20101403
EDD: No EDD Specified

2 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	2	Level II due 11/11,level IV 11/18

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15058**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20101403
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20101403-02**	**LH18/24-SP650_102720-AIX**	**Water**	**27 Oct 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			11 Nov 2020
2.	**HS20101403-03**	**LH18/24-SP650_102720-Between**	**Water**	**27 Oct 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			11 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Monaghan Date/Time:

Received By: Date/Time: 10/28/20 1340

Cooler ID(s): Temperature(s):

01018699

Cooler Receipt Form

ALS Environmental

Project Chemist CL

Client/Project ALS-HI

Thermometer ID 1051

Date/Time Received: 10/28/20 Initials: CL

Date/Time Logged in: 10/28/20 Initials CL

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ✓ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		10/28/20	1340	CL	0.4	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 369061 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/4/20 15:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000959-001	LOD Perchlorate Water	.01	6850/ClO4			Water	10mL	
2	E2000959-002	LOQ Perchlorate Water	.01	6850/ClO4			Water	10mL	
3	E2001050-001	LH18/24-SP650_102720-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2001050-002	LH18/24-SP650_102720-Between	.01	6850/ClO4 DOD			Water	10mL	
5	E2001054-001	16RW09-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001054-002	16RW10-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001054-003	16RW06-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001054-004	16RW07-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001054-005	16PM14-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001054-006	16PM14-2010226-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001054-007	16PM06-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001054-008	16PM09-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001054-009	16PM02-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001054-010	16PM03-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001054-011	16SW01-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001054-012	16SW02-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001054-013	16SW03-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
18	EQ2000557-01	MB		6850/ClO4 DOD			Liquid	10mL	
19	EQ2000557-02	LCS		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000557-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000557-04	16RW09-2010226 MS	.01	6850/ClO4 DOD			Liquid	10mL	
22	EQ2000557-05	16RW09-2010226 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000557-02	1.00µL	EQ2000557-02	1.00µL	EQ2000557-03	1.00µL	EQ2000557-03	1.00µL	EQ2000557-04	1.00µL	EQ2000557-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000959-001	100.00µL	E2000959-002	100.00µL	E2001050-001	100.00µL	E2001050-002	100.00µL	E2001054-001	100.00µL	E2001054-002	100.00µL
E2001054-003	100.00µL	E2001054-004	100.00µL	E2001054-005	100.00µL	E2001054-006	100.00µL	E2001054-007	100.00µL	E2001054-008	100.00µL
E2001054-009	100.00µL	E2001054-010	100.00µL	E2001054-011	100.00µL	E2001054-012	100.00µL	E2001054-013	100.00µL	EQ2000557-01	100.00µL
EQ2000557-01	100.00µL	EQ2000557-02	100.00µL	EQ2000557-02	100.00µL	EQ2000557-03	100.00µL	EQ2000557-03	100.00µL	EQ2000557-04	100.00µL
EQ2000557-05	100.00µL										

Preparation Information Benchsheet

Prep Run#: 369061 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/4/20 15:00

Preparation Steps

Step: Preparation
Started: 11/4/20 15:00
Finished: 11/4/20 16:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 11/4/2020

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	10/27/20 1400
Sample Matrix:	Water	**Date Received:**	10/28/20
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 18:43
Sample Name:	LH18/24-SP650_102720-AIX	**Units:**	µg/L
Lab Code:	E2001050-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_015	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	10/27/20 1400
Sample Matrix:	Water	**Date Received:**	10/28/20
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 18:51
Sample Name:	LH18/24-SP650_102720-Between	**Units:**	µg/L
Lab Code:	E2001050-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_016	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**6.64**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 17:48
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000557-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_008	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20101403
Sample Matrix: Water

Service Request: E2001050
Date Analyzed: 11/ 4/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 369061

	Lab Control Sample EQ2000557-02			Duplicate Lab Control Sample EQ2000557-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.118	0.100	118	0.119	0.100	119	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 17:56
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000557-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_009	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.118**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 18:04
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000557-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_010	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.119**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/ 5/20

Matrix Spike Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2001054-001	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS				Batch QCDMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2000557-04				EQ2000557-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.120	0.235	0.100	115	0.229	0.100	108	84 - 119	3	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/5/20 13:46
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000557-04	**Basis:**	NA
Run Type:	Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	702385
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201105\20201105_011	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.235**		0.200	0.100	0.0500	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/5/20 13:54
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000557-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	702385
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201105\20201105_012	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.229**		0.200	0.100	0.0500	

ALS Environmental
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November 11, 2020 **Analytical Report for Service Request No:** K2009923

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: ALS Houston DOD TOC / HS20101403

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 30, 2020
For your reference, these analyses have been assigned our service request number **K2009923.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2009923
Date Received: 10/30/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 10/30/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Davis Date 11/11/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

K2009923

SAMPLING STATE: **Dept of Defense**

COC ID: **15057**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20101403
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20101403-01**	**LH18/24-SP650_102720**	**Water**	**27 Oct 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			11 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 10/29/2020 1800

Received By: _____ Date/Time: 10/30/20 1000

Cooler ID(s): _____ Temperature(s): _____

PM RL

Cooler Receipt and Preservation Form

Client ALS/Houston Service Request K20 009128

Received: 10/30/20 Opened: 10/30/20 By: L Unloaded: 10/30/20 By: L

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2, front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
1.3	—	IR01	15062	1		1891 8852 1535	
			15057				

6. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2009923
Project:	ALS Houston DOD TOC/HS20101403	**Date Collected:**	10/27/20
Sample Matrix:	Water	**Date Received:**	10/30/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_102720	K2009923-001	**1.68**	0.50	0.20	0.07	1	11/07/20 13:38	
Method Blank	K2009923-MB	ND U	0.50	0.20	0.07	1	11/07/20 13:38	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009923
Project:	ALS Houston DOD TOC/HS20101403	**Date Analyzed:**	11/07/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	702585

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2009923-LCS	25.8	25.0	103	83-117

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 23, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110120**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 04, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: RJ.MODASHIA
RJ Modashia
Project Manager

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110120

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110120-01	LH18/24-SP650_110320	Water		03-Nov-2020 14:00	04-Nov-2020 09:30	☐
HS20110120-02	LH18/24-SP650_110320-AIX	Water		03-Nov-2020 14:00	04-Nov-2020 09:30	☐

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110120

Work Order Comments

• The analysis for Perchlorate was subcontracted to ALS Salt Lake City, UT. Final report attached.

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

WetChemistry by Method E350.3

Batch ID: R372766

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R372077

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20110120
Sample ID: LH18/24-SP650_110320
Lab ID:HS20110120-01
Collection Date: 03-Nov-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**13**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	17-Nov-2020 12:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.59**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	04-Nov-2020 12:39
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	18-Nov-2020 17:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20110120
Sample ID: LH18/24-SP650_110320-AIX
Lab ID:HS20110120-02
Collection Date: 03-Nov-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Nov-2020 10:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110120

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R372077 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20110120-01	LH18/24-SP650_110320	03 Nov 2020 14:00			04 Nov 2020 12:39	10
Batch ID: R372766 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20110120-01	LH18/24-SP650_110320	03 Nov 2020 14:00			17 Nov 2020 12:00	1
Batch ID: R372897 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20110120-01	LH18/24-SP650_110320	03 Nov 2020 14:00			18 Nov 2020 17:20	1
Batch ID: R373181 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20110120-02	LH18/24-SP650_110320-AIX	03 Nov 2020 14:00			23 Nov 2020 10:46	1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110120

QC BATCH REPORT

Batch ID: R372077 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-372077** Units: **mg/L** Analysis Date: **04-Nov-2020 12:39**
Client ID: Run ID: **UV-2450_372077** SeqNo: **5818567** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-372077** Units: **mg/L** Analysis Date: **04-Nov-2020 12:39**
Client ID: Run ID: **UV-2450_372077** SeqNo: **5818568** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.265	0.0250	0.25	0	106	85 - 115				

MS Sample ID: **HS20110120-01MS** Units: **mg/L** Analysis Date: **04-Nov-2020 12:40**
Client ID: **LH18/24-SP650_110320** Run ID: **UV-2450_372077** SeqNo: **5818569** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	5.16	0.250	2.5	2.59	103	80 - 120				

MSD Sample ID: **HS20110120-01MSD** Units: **mg/L** Analysis Date: **04-Nov-2020 12:40**
Client ID: **LH18/24-SP650_110320** Run ID: **UV-2450_372077** SeqNo: **5818570** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	5.14	0.250	2.5	2.59	102	80 - 120	5.16	0.388	20	

The following samples were analyzed in this batch: HS20110120-01

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ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110120

QC BATCH REPORT

Batch ID: R372766 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-372766** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835939** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-372766** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835940** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.22	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20110452-01MS** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835942** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.09	0.20	10	0.335	97.5	80 - 120				

MSD Sample ID: **HS20110452-01MSD** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835943** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.07	0.20	10	0.335	97.3	80 - 120	10.09	0.189	20	

The following samples were analyzed in this batch: HS20110120-01

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ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20110120**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

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ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110120

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110120-01	LH18/24-SP650_110320	Login	11/4/2020 11:51:27 AM	PMG	WET367
HS20110120-01	LH18/24-SP650_110320	Login	11/4/2020 11:51:27 AM	PMG	WET367
HS20110120-01	LH18/24-SP650_110320	Login	11/4/2020 11:51:27 AM	PMG	Sub
HS20110120-02	LH18/24-SP650_110320-AIX	Login	11/4/2020 11:51:27 AM	PMG	Sub

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ALS Houston, US Date: 23-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110120 **Date/Time Received:** **04-Nov-2020 09:30**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	04-Nov-2020 11:53	**Reviewed by:**	/S/ RJ Modashia	04-Nov-2020 16:09
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.7C U/C	IR31
Cooler(s)/Kit(s):	46559	
Date/Time sample(s) sent to storage:	11/4/2020 12:00	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20110120

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant: Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_110320	Water	11/03/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_110320	Water	11/03/20 / 14:00		1			X		NONE	
LH18/24–SP650_110320_AIX	Water	11/03/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	11/03/20	14:30		11/4/2020	09:3						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

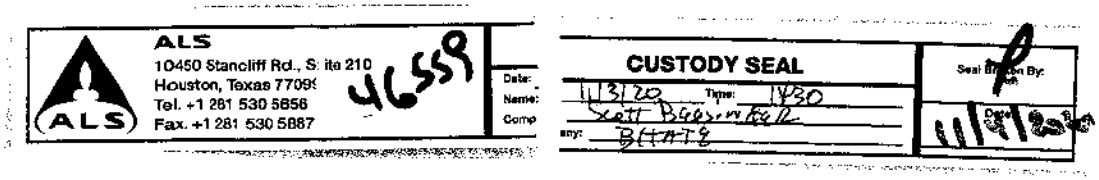
46559 VIC. 0.7e.

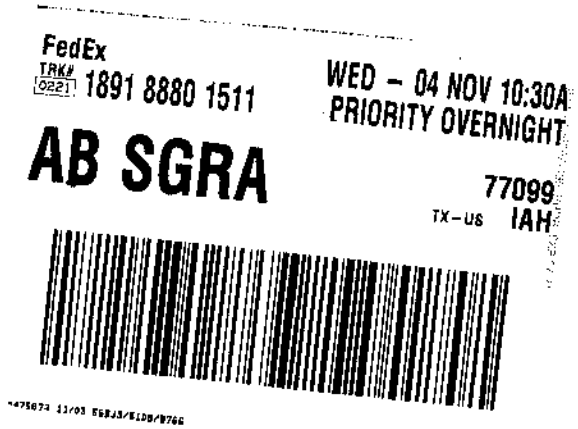
+31

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(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

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November 23, 2020 Service Request No:E2001081

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20110120

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 04, 2020
For your reference, these analyses have been assigned our service request number **E2001081.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001081
Project:	HS20110120	**Date Received:**	11/04/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/04/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000584: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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Client: ALS Environmental - US **Service Request:**E2001081
Project: HS20110120

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001081-001	LH18/24-SP650_110320-AIX	11/3/2020	1400

Service Request Summary

Folder #: **E2001081**
Client Name: ALS Environmental - US
Project Name: HS20110120
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: TWOODS
Date Received: 11/04/20
Internal Due Date: 11/19/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110120
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001081-001	LH18/24-SP650_110320-AIX	Water	11/03/20 1400	**IV**

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Service Request Summary

Folder #: **E2001081**
Client Name: ALS Environmental - US
Project Name: HS20110120
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: TWOODS
Date Received: 11/04/20
Internal Due Date: 11/19/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110120
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 11/18, level IV due 11/25

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Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

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Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

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Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

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Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
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www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15098**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110120
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110120-02**	**LH18/24-SP650_110320-AIX**	**Water**	**03 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			18 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: [signature] Date/Time: 11/04/20 18:00

Received By: [signature] Date/Time: 11/4/20 18:00

Cooler ID(s): Temperature(s):

01018754

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR31

Date/Time Received: 11/4/20 Initials: CH Date/Time Logged in: 11/4/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
—		11/4/20	1800	CH	3.1	X
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 369483 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/10/20 08:50

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001078-001	COBS_1 (1388-006)	.01	6850/ClO4			Water	10mL	
2	E2001078-002	COBS_3 (1388-007)	.01	6850/ClO4			Water	10mL	
3	E2001078-003	NOBS_1 (1388-008)	.01	6850/ClO4			Water	10mL	
4	E2001078-004	NOBS_2 (1388-009)	.01	6850/ClO4			Water	10mL	
5	E2001078-005	Orestock_2 (1388-010)	.01	6850/ClO4			Water	10mL	
6	E2001078-006	Orestock_4 (1388-011)	.01	6850/ClO4			Water	10mL	
7	E2001078-007	Orestock_1 (1388-012)	.01	6850/ClO4			Water	10mL	
8	E2001078-008	Orestock_3 (1388-013)	.01	6850/ClO4			Water	10mL	
9	E2001078-009	HEAP_2 (1388-014)	.01	6850/ClO4			Water	10mL	
10	E2001078-010	HEAP_4 (1388-015)	.01	6850/ClO4			Water	10mL	
11	E2001078-011	HEAP_5 (1388-016)	.01	6850/ClO4			Water	10mL	
12	E2001078-012	HEAP_8 (1388-017)	.01	6850/ClO4			Water	10mL	
13	E2001078-013	NOBS_1 Dup (1388-008 DUP)	.01	6850/ClO4			Water	10mL	
14	E2001078-014	Prep Blank	.01	6850/ClO4			Water	10mL	
15	EQ2000584-01	MB		6850/ClO4			Liquid	10mL	
16	EQ2000584-02	LCS		6850/ClO4			Liquid	10mL	
17	EQ2000584-03	DLCS		6850/ClO4			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000584-02 100.00µL EQ2000584-03 100.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 213952 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001078-001 100.00µL E2001078-002 100.00µL E2001078-003 100.00µL E2001078-004 100.00µL E2001078-005 100.00µL E2001078-006 100.00µL
E2001078-007 100.00µL E2001078-008 100.00µL E2001078-014 100.00µL EQ2000584-01 100.00µL EQ2000584-02 100.00µL EQ2000584-03 100.00µL

Preparation Steps

Step: Preparation
Started: 11/10/20 08:50
Finished: 11/10/20 09:20
By: GRIVERA
Comments

Preparation Information Benchsheet

Prep Run#: 369483
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/10/20 08:50

Comments: _____

Reviewed By: GR Date: 11/10/2020

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

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Analytical Results

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	11/ 3/20 1400
Sample Matrix:	Water	**Date Received:**	11/ 4/20
Sample Name:	LH18/24-SP650_110320-AIX	**Units:**	µg/L
Lab Code:	E2001081-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:44	369486	704366	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000586-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:20	369486	704366	

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Accuracy & Precision

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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Analyzed:**	11/20/20
Sample Matrix:	Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	369486

	Lab Control Sample EQ2000586-02			Duplicate Lab Control Sample EQ2000586-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.111	0.100	111	0.115	0.100	115	84 - 119	3	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000586-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:28	369486	704366	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000586-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.115**		0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:36	369486	704366	

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November 18, 2020 **Analytical Report for Service Request No:** K2010199

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: ALS Houston DOD TOC

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 05, 2020
For your reference, these analyses have been assigned our service request number **K2010199.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

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ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

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ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

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Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2010199
Date Received: 11/05/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 11/05/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Dan Date 11/18/2020

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Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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K2010199

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15097**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110120
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110120-01**	**LH18/24-SP650_110320**	**Water**	**03 Nov 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			18 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia

Date/Time: 11/04/20 18:00

Received By:

Date/Time: 11/5/20 1015

Cooler ID(s):

Temperature(s):

PM KL

Cooler Receipt and Preservation Form

Client ALS-Houston Service Request K20 10195

Received: 11/5/20 Opened: 11/5/20 By: BR Unloaded: 11/5/20 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 2 front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID/ NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
0.9	—	IR1		—		189188824946	

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

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General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010199
Project:	ALS Houston DOD TOC	**Date Collected:**	11/3/20
Sample Matrix:	Water	**Date Received:**	11/5/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_110320	K2010199-001	**1.20**	0.50	0.20	0.07	1	11/11/20 17:58	
Method Blank	K2010199-MB	ND U	0.50	0.20	0.07	1	11/11/20 17:58	

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010199
Project:	ALS Houston DOD TOC	**Date Analyzed:**	11/11/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	703161

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010199-LCS	25.9	25.0	104	83-117

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10450 Stancliff Rd. Suite 210
Houston, TX 77099
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F: +1 281 530 5887

November 12, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110121**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 04, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110121

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110121-01	LH18/24-SP650_110320	Water		03-Nov-2020 14:00	04-Nov-2020 09:30	☐
HS20110121-02	Trip Blank	Water	CG-100620-216	03-Nov-2020 00:00	04-Nov-2020 09:30	☐

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110121

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R372017

Sample ID: HS20101419-01MS

- MS and MSD are for an unrelated sample (Chloride,Sulfate)

WetChemistry by Method SW9056

Batch ID: R372517

Sample ID: HS20101419-01MS

- MS and MSD are for an unrelated sample (Chloride,Sulfate)

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110121
Sample ID: LH18/24-SP650_110320 Lab ID:HS20110121-01
Collection Date: 03-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	04-Nov-2020 16:54
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	04-Nov-2020 16:54
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	04-Nov-2020 16:54
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	04-Nov-2020 16:54
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	04-Nov-2020 16:54
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110121
Sample ID: LH18/24-SP650_110320 Lab ID:HS20110121-01
Collection Date: 03-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
cis-1,2-Dichloroethene	**12**		**0.20**	**0.50**	**1.0**	**UG/L**	1	04-Nov-2020 16:54
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	04-Nov-2020 16:54
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	04-Nov-2020 16:54
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Trichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	04-Nov-2020 16:54
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Surr: 1,2-Dichloroethane-d4	*89.3*			**0**	*81-118*	*%REC*	*1*	*04-Nov-2020 16:54*
Surr: 4-Bromofluorobenzene	*95.2*			**0**	*85-114*	*%REC*	*1*	*04-Nov-2020 16:54*
Surr: Dibromofluoromethane	*85.9*			**0**	*80-119*	*%REC*	*1*	*04-Nov-2020 16:54*
Surr: Toluene-d8	*98.1*			**0**	*89-112*	*%REC*	*1*	*04-Nov-2020 16:54*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**620**		**2.00**	**5.00**	**5.00**	**mg/L**	10	11-Nov-2020 23:12
Sulfate	**34.4**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 22:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110121

Sample ID: Trip Blank Lab ID:HS20110121-02

Collection Date: 03-Nov-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	04-Nov-2020 16:33
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	04-Nov-2020 16:33
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	04-Nov-2020 16:33
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	04-Nov-2020 16:33
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	04-Nov-2020 16:33
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110121
Sample ID: Trip Blank Lab ID:HS20110121-02
Collection Date: 03-Nov-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	04-Nov-2020 16:33
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	04-Nov-2020 16:33
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Surr: 1,2-Dichloroethane-d4	*85.4*			**0**	*81-118*	*%REC*	*1*	*04-Nov-2020 16:33*
Surr: 4-Bromofluorobenzene	*89.7*			**0**	*85-114*	*%REC*	*1*	*04-Nov-2020 16:33*
Surr: Dibromofluoromethane	*83.6*			**0**	*80-119*	*%REC*	*1*	*04-Nov-2020 16:33*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*04-Nov-2020 16:33*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R372017 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20110121-01	LH18/24-SP650_110320	03 Nov 2020 14:00			04 Nov 2020 16:54	1
HS20110121-02	Trip Blank	03 Nov 2020 00:00			04 Nov 2020 16:33	1
Batch ID: R372517 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20110121-01	LH18/24-SP650_110320	03 Nov 2020 14:00			11 Nov 2020 23:12	10
HS20110121-01	LH18/24-SP650_110320	03 Nov 2020 14:00			11 Nov 2020 22:54	1

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201104** Units: **UG/L** Analysis Date: **04-Nov-2020 11:59**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817374** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201104** Units: **UG/L** Analysis Date: **04-Nov-2020 11:59**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817374** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.13*	*1.0*	*50*	*0*	*86.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.57*	*1.0*	*50*	*0*	*95.1*	*85 - 114*				
Surr: Dibromofluoromethane	*43.83*	*1.0*	*50*	*0*	*87.7*	*80 - 119*				
Surr: Toluene-d8	*51.54*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201104** Units: **UG/L** Analysis Date: **04-Nov-2020 11:17**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817373** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	17.06	1.0	20	0	85.3	78 - 124				
1,1,1-Trichloroethane	17.2	1.0	20	0	86.0	74 - 131				
1,1,2,2-Tetrachloroethane	19.95	1.0	20	0	99.8	71 - 121				
1,1,2-Trichloroethane	18.77	1.0	20	0	93.9	80 - 119				
1,1-Dichloroethane	18.44	1.0	20	0	92.2	77 - 125				
1,1-Dichloroethene	19.59	1.0	20	0	98.0	71 - 131				
1,1-Dichloropropene	16.91	1.0	20	0	84.6	78 - 125				
1,2,3-Trichlorobenzene	16.76	1.0	20	0	83.8	69 - 129				
1,2,3-Trichloropropane	20.21	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	18.85	1.0	20	0	94.2	69 - 130				
1,2,4-Trimethylbenzene	16.15	1.0	20	0	80.8	76 - 124				
1,2-Dibromo-3-chloropropane	18.08	1.0	20	0	90.4	62 - 128				
1,2-Dibromoethane	18.75	1.0	20	0	93.7	77 - 121				
1,2-Dichlorobenzene	16.75	1.0	20	0	83.7	80 - 119				
1,2-Dichloroethane	17.71	1.0	20	0	88.6	73 - 128				
1,2-Dichloropropane	17.33	1.0	20	0	86.6	78 - 122				
1,3,5-Trimethylbenzene	15.62	1.0	20	0	78.1	75 - 124				
1,3-Dichlorobenzene	17.24	1.0	20	0	86.2	80 - 119				
1,3-Dichloropropane	18.4	1.0	20	0	92.0	80 - 119				
1,4-Dichlorobenzene	16.67	1.0	20	0	83.3	79 - 118				
2,2-Dichloropropane	17.88	1.0	20	0	89.4	60 - 139				
2-Butanone	36.88	2.0	40	0	92.2	56 - 143				
2-Chlorotoluene	16.7	1.0	20	0	83.5	79 - 122				
2-Hexanone	37.09	2.0	40	0	92.7	57 - 139				
4-Chlorotoluene	16.05	1.0	20	0	80.3	78 - 122				
4-Isopropyltoluene	15.77	1.0	20	0	78.8	77 - 127				
4-Methyl-2-pentanone	35.63	2.0	40	0	89.1	67 - 130				
Acetone	50.52	2.0	40	0	126	39 - 160				
Benzene	17.58	1.0	20	0	87.9	79 - 120				
Bromobenzene	16.87	1.0	20	0	84.3	80 - 120				
Bromochloromethane	20.33	1.0	20	0	102	78 - 123				
Bromodichloromethane	18.34	1.0	20	0	91.7	79 - 125				
Bromoform	18.88	1.0	20	0	94.4	66 - 130				
Bromomethane	19.21	1.0	20	0	96.1	53 - 141				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201104** Units: **UG/L** Analysis Date: **04-Nov-2020 11:17**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817373** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.15	2.0	40	0	92.9	64 - 133				
Carbon tetrachloride	16.35	1.0	20	0	81.8	72 - 136				
Chlorobenzene	17.31	1.0	20	0	86.5	82 - 118				
Chloroethane	17.9	1.0	20	0	89.5	60 - 138				
Chloroform	18.75	1.0	20	0	93.7	79 - 124				
Chloromethane	20.03	1.0	20	0	100	50 - 139				
cis-1,2-Dichloroethene	17.8	1.0	20	0	89.0	78 - 123				
cis-1,3-Dichloropropene	18.62	1.0	20	0	93.1	75 - 124				
Dibromochloromethane	18.83	1.0	20	0	94.2	74 - 126				
Dibromomethane	19.69	1.0	20	0	98.4	79 - 123				
Dichlorodifluoromethane	16.93	1.0	20	0	84.7	32 - 152				
Ethylbenzene	16.89	1.0	20	0	84.4	79 - 121				
Hexachlorobutadiene	16.63	1.0	20	0	83.2	66 - 134				
Isopropylbenzene	15.74	1.0	20	0	78.7	72 - 131				
m,p-Xylene	33.39	2.0	40	0	83.5	80 - 121				
Methylene chloride	17.81	2.0	20	0	89.1	74 - 124				
Naphthalene	20.52	1.0	20	0	103	61 - 128				
n-Butylbenzene	15.71	1.0	20	0	78.5	75 - 128				
n-Propylbenzene	16.08	1.0	20	0	80.4	76 - 126				
o-Xylene	16.53	1.0	20	0	82.7	78 - 122				
sec-Butylbenzene	15.74	1.0	20	0	78.7	77 - 126				
Styrene	17.75	1.0	20	0	88.7	78 - 123				
tert-Butylbenzene	16.29	1.0	20	0	81.5	78 - 124				
Tetrachloroethene	15.4	1.0	20	0	77.0	74 - 129				
Toluene	16.16	1.0	20	0	80.8	80 - 121				
trans-1,2-Dichloroethene	17.49	1.0	20	0	87.5	75 - 124				
trans-1,3-Dichloropropene	18.97	1.0	20	0	94.8	73 - 127				
Trichloroethene	18.05	1.0	20	0	90.3	79 - 123				
Trichlorofluoromethane	18.19	1.0	20	0	90.9	65 - 141				
Vinyl chloride	18.62	1.0	20	0	93.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.73*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.55*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*49.34*	*1.0*	*50*	*0*	*98.7*	*80 - 119*				
Surr: Toluene-d8	*48.52*	*1.0*	*50*	*0*	*97.0*	*89 - 112*				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20101419-01MS** Units: **UG/L** Analysis Date: **04-Nov-2020 15:09**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817383** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	211.7	10	200	0	106	78 - 124				
1,1,1-Trichloroethane	212.3	10	200	0	106	74 - 131				
1,1,2,2-Tetrachloroethane	242.7	10	200	0	121	71 - 121				S
1,1,2-Trichloroethane	207.3	10	200	0	104	80 - 119				
1,1-Dichloroethane	215.6	10	200	0	108	77 - 125				
1,1-Dichloroethene	256.8	10	200	7.216	125	71 - 131				
1,1-Dichloropropene	226.9	10	200	0	113	78 - 125				
1,2,3-Trichlorobenzene	229.1	10	200	0	115	69 - 129				
1,2,3-Trichloropropane	227.3	10	200	0	114	73 - 122				
1,2,4-Trichlorobenzene	217.9	10	200	0	109	69 - 130				
1,2,4-Trimethylbenzene	222.8	10	200	0	111	76 - 124				
1,2-Dibromo-3-chloropropane	207.7	10	200	0	104	62 - 128				
1,2-Dibromoethane	227.2	10	200	0	114	77 - 121				
1,2-Dichlorobenzene	212.7	10	200	0	106	80 - 119				
1,2-Dichloroethane	219.2	10	200	0	110	73 - 128				
1,2-Dichloropropane	224	10	200	0	112	78 - 122				
1,3,5-Trimethylbenzene	220.6	10	200	0	110	75 - 124				
1,3-Dichlorobenzene	223.9	10	200	0	112	80 - 119				
1,3-Dichloropropane	221.8	10	200	0	111	80 - 119				
1,4-Dichlorobenzene	215.3	10	200	0	108	79 - 118				
2,2-Dichloropropane	217.9	10	200	0	109	60 - 139				
2-Butanone	392.3	20	400	0	98.1	56 - 143				
2-Chlorotoluene	221.4	10	200	0	111	79 - 122				
2-Hexanone	435.8	20	400	0	109	57 - 139				
4-Chlorotoluene	208.7	10	200	0	104	78 - 122				
4-Isopropyltoluene	230.4	10	200	0	115	77 - 127				
4-Methyl-2-pentanone	414.6	20	400	0	104	67 - 130				
Acetone	457.8	20	400	0	114	39 - 160				
Benzene	219.7	10	200	0	110	79 - 120				
Bromobenzene	220.7	10	200	0	110	80 - 120				
Bromochloromethane	223.6	10	200	0	112	78 - 123				
Bromodichloromethane	221.5	10	200	0	111	79 - 125				
Bromoform	202.6	10	200	0	101	66 - 130				
Bromomethane	186.1	10	200	0	93.0	53 - 141				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20101419-01MS** Units: **UG/L** Analysis Date: **04-Nov-2020 15:09**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817383** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	439.1	20	400	0	110	64 - 133				
Carbon tetrachloride	229.8	10	200	0	115	72 - 136				
Chlorobenzene	217.5	10	200	0	109	82 - 118				
Chloroethane	210.4	10	200	0	105	60 - 138				
Chloroform	217	10	200	0	109	79 - 124				
Chloromethane	223.2	10	200	0	112	50 - 139				
cis-1,2-Dichloroethene	490.9	10	200	293.3	98.8	78 - 123				
cis-1,3-Dichloropropene	220.8	10	200	0	110	75 - 124				
Dibromochloromethane	233.9	10	200	0	117	74 - 126				
Dibromomethane	226.9	10	200	0	113	79 - 123				
Dichlorodifluoromethane	251.4	10	200	0	126	32 - 152				
Ethylbenzene	220.7	10	200	0	110	79 - 121				
Hexachlorobutadiene	301.3	10	200	0	151	66 - 134				S
Isopropylbenzene	225.3	10	200	0	113	72 - 131				
m,p-Xylene	457.1	20	400	0	114	80 - 121				
Methylene chloride	199	20	200	0	99.5	74 - 124				
Naphthalene	200	10	200	0	100.0	61 - 128				
n-Butylbenzene	230.9	10	200	0	115	75 - 128				
n-Propylbenzene	237.2	10	200	0	119	76 - 126				
o-Xylene	213.8	10	200	0	107	78 - 122				
sec-Butylbenzene	237.5	10	200	0	119	77 - 126				
Styrene	229.3	10	200	0	115	78 - 123				
tert-Butylbenzene	233.8	10	200	0	117	78 - 124				
Tetrachloroethene	230.1	10	200	0	115	74 - 129				
Toluene	207	10	200	0	104	80 - 121				
trans-1,2-Dichloroethene	226.2	10	200	0	113	75 - 124				
trans-1,3-Dichloropropene	235	10	200	0	117	73 - 127				
Trichloroethene	1214	10	200	981.1	116	79 - 123				O
Trichlorofluoromethane	245.5	10	200	0	123	65 - 141				
Vinyl chloride	277.1	10	200	33.28	122	58 - 137				
Surr: 1,2-Dichloroethane-d4	*443.7*	*10*	*500*	*0*	*88.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*482*	*10*	*500*	*0*	*96.4*	*85 - 114*				
Surr: Dibromofluoromethane	*448.9*	*10*	*500*	*0*	*89.8*	*80 - 119*				
Surr: Toluene-d8	*482.4*	*10*	*500*	*0*	*96.5*	*89 - 112*				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20101419-01MSD** Units: **UG/L** Analysis Date: **04-Nov-2020 15:30**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817384** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	214.8	10	200	0	107	78 - 124	211.7	1.43	20	
1,1,1-Trichloroethane	221.7	10	200	0	111	74 - 131	212.3	4.34	20	
1,1,2,2-Tetrachloroethane	268.1	10	200	0	134	71 - 121	242.7	9.97	20	S
1,1,2-Trichloroethane	232.4	10	200	0	116	80 - 119	207.3	11.4	20	
1,1-Dichloroethane	210.6	10	200	0	105	77 - 125	215.6	2.38	20	
1,1-Dichloroethene	240.5	10	200	7.216	117	71 - 131	256.8	6.54	20	
1,1-Dichloropropene	241.4	10	200	0	121	78 - 125	226.9	6.23	20	
1,2,3-Trichlorobenzene	240.6	10	200	0	120	69 - 129	229.1	4.92	20	
1,2,3-Trichloropropane	254.7	10	200	0	127	73 - 122	227.3	11.4	20	S
1,2,4-Trichlorobenzene	233.7	10	200	0	117	69 - 130	217.9	6.99	20	
1,2,4-Trimethylbenzene	246.9	10	200	0	123	76 - 124	222.8	10.2	20	
1,2-Dibromo-3-chloropropane	283.6	10	200	0	142	62 - 128	207.7	30.9	20	SR
1,2-Dibromoethane	234.2	10	200	0	117	77 - 121	227.2	3.05	20	
1,2-Dichlorobenzene	240.4	10	200	0	120	80 - 119	212.7	12.2	20	S
1,2-Dichloroethane	214	10	200	0	107	73 - 128	219.2	2.36	20	
1,2-Dichloropropane	223.3	10	200	0	112	78 - 122	224	0.297	20	
1,3,5-Trimethylbenzene	232.6	10	200	0	116	75 - 124	220.6	5.31	20	
1,3-Dichlorobenzene	240.6	10	200	0	120	80 - 119	223.9	7.21	20	S
1,3-Dichloropropane	227.7	10	200	0	114	80 - 119	221.8	2.64	20	
1,4-Dichlorobenzene	237.5	10	200	0	119	79 - 118	215.3	9.78	20	S
2,2-Dichloropropane	224	10	200	0	112	60 - 139	217.9	2.76	20	
2-Butanone	381.7	20	400	0	95.4	56 - 143	392.3	2.74	20	
2-Chlorotoluene	245.5	10	200	0	123	79 - 122	221.4	10.3	20	S
2-Hexanone	452.6	20	400	0	113	57 - 139	435.8	3.77	20	
4-Chlorotoluene	226.1	10	200	0	113	78 - 122	208.7	7.98	20	
4-Isopropyltoluene	236.4	10	200	0	118	77 - 127	230.4	2.54	20	
4-Methyl-2-pentanone	417.9	20	400	0	104	67 - 130	414.6	0.795	20	
Acetone	410.6	20	400	0	103	39 - 160	457.8	10.9	20	
Benzene	227.1	10	200	0	114	79 - 120	219.7	3.29	20	
Bromobenzene	241.2	10	200	0	121	80 - 120	220.7	8.85	20	S
Bromochloromethane	214.6	10	200	0	107	78 - 123	223.6	4.11	20	
Bromodichloromethane	226.4	10	200	0	113	79 - 125	221.5	2.19	20	
Bromoform	209.2	10	200	0	105	66 - 130	202.6	3.21	20	
Bromomethane	174.8	10	200	0	87.4	53 - 141	186.1	6.25	20	

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20101419-01MSD** Units: **UG/L** Analysis Date: **04-Nov-2020 15:30**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817384** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	431.3	20	400	0	108	64 - 133	439.1	1.81	20	
Carbon tetrachloride	238.6	10	200	0	119	72 - 136	229.8	3.78	20	
Chlorobenzene	224.1	10	200	0	112	82 - 118	217.5	2.99	20	
Chloroethane	179.9	10	200	0	89.9	60 - 138	210.4	15.6	20	
Chloroform	203.6	10	200	0	102	79 - 124	217	6.38	20	
Chloromethane	219.7	10	200	0	110	50 - 139	223.2	1.58	20	
cis-1,2-Dichloroethene	481.8	10	200	293.3	94.3	78 - 123	490.9	1.87	20	
cis-1,3-Dichloropropene	229.7	10	200	0	115	75 - 124	220.8	3.95	20	
Dibromochloromethane	248	10	200	0	124	74 - 126	233.9	5.86	20	
Dibromomethane	235.9	10	200	0	118	79 - 123	226.9	3.88	20	
Dichlorodifluoromethane	246.2	10	200	0	123	32 - 152	251.4	2.08	20	
Ethylbenzene	226.6	10	200	0	113	79 - 121	220.7	2.64	20	
Hexachlorobutadiene	267.7	10	200	0	134	66 - 134	301.3	11.8	20	
Isopropylbenzene	224.1	10	200	0	112	72 - 131	225.3	0.503	20	
m,p-Xylene	492.6	20	400	0	123	80 - 121	457.1	7.48	20	S
Methylene chloride	194.4	20	200	0	97.2	74 - 124	199	2.32	20	
Naphthalene	247.4	10	200	0	124	61 - 128	200	21.2	20	R
n-Butylbenzene	230	10	200	0	115	75 - 128	230.9	0.384	20	
n-Propylbenzene	248.5	10	200	0	124	76 - 126	237.2	4.65	20	
o-Xylene	229.2	10	200	0	115	78 - 122	213.8	6.94	20	
sec-Butylbenzene	236	10	200	0	118	77 - 126	237.5	0.622	20	
Styrene	227.3	10	200	0	114	78 - 123	229.3	0.903	20	
tert-Butylbenzene	244.3	10	200	0	122	78 - 124	233.8	4.38	20	
Tetrachloroethene	236	10	200	0	118	74 - 129	230.1	2.53	20	
Toluene	216.4	10	200	0	108	80 - 121	207	4.42	20	
trans-1,2-Dichloroethene	221.6	10	200	0	111	75 - 124	226.2	2.07	20	
trans-1,3-Dichloropropene	227.7	10	200	0	114	73 - 127	235	3.13	20	
Trichloroethene	1188	10	200	981.1	103	79 - 123	1214	2.14	20	O
Trichlorofluoromethane	239.9	10	200	0	120	65 - 141	245.5	2.33	20	
Vinyl chloride	256.1	10	200	33.28	111	58 - 137	277.1	7.86	20	
Surr: 1,2-Dichloroethane-d4	*428.8*	*10*	*500*	*0*	*85.8*	*81 - 118*	*443.7*	*3.43*	*20*	
Surr: 4-Bromofluorobenzene	*476.3*	*10*	*500*	*0*	*95.3*	*85 - 114*	*482*	*1.2*	*20*	
Surr: Dibromofluoromethane	*438.1*	*10*	*500*	*0*	*87.6*	*80 - 119*	*448.9*	*2.43*	*20*	
Surr: Toluene-d8	*492.8*	*10*	*500*	*0*	*98.6*	*89 - 112*	*482.4*	*2.13*	*20*	

ALS Houston, US Date: 12-Nov-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20110121

QC BATCH REPORT

Batch ID:	**R372017 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch:	HS20110121-01	HS20110121-02

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372517 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-111120** Units: **mg/L** Analysis Date: **11-Nov-2020 18:24**
Client ID: Run ID: **ICS-Integrion_372517** SeqNo: **5829719** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-111120** Units: **mg/L** Analysis Date: **11-Nov-2020 18:42**
Client ID: Run ID: **ICS-Integrion_372517** SeqNo: **5829720** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.42	0.500	20	0	102	80 - 120				
Sulfate	20.77	0.500	20	0	104	80 - 120				

MS Sample ID: **HS20101419-01MS** Units: **mg/L** Analysis Date: **12-Nov-2020 00:24**
Client ID: Run ID: **ICS-Integrion_372517** SeqNo: **5829733** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1034	0.500	10	1053	-192	80 - 120				SEO
Sulfate	204.1	0.500	10	201.2	29.4	80 - 120				SEO

MSD Sample ID: **HS20101419-01MSD** Units: **mg/L** Analysis Date: **12-Nov-2020 00:42**
Client ID: Run ID: **ICS-Integrion_372517** SeqNo: **5829734** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1039	0.500	10	1053	-141	80 - 120	1034	0.49	20	SEO
Sulfate	206.3	0.500	10	201.2	51.7	80 - 120	204.1	1.09	20	SEO

The following samples were analyzed in this batch: HS20110121-01

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20110121**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110121

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110121-01	LH18/24-SP650_110320	Login	11/4/2020 12:06:18 PM	PMG	WET249
HS20110121-01	LH18/24-SP650_110320	Login	11/4/2020 12:06:18 PM	PMG	VOA223
HS20110121-02	Trip Blank	Login	11/4/2020 12:06:18 PM	PMG	VOA223

ALS Houston, US Date: 12-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110121 **Date/Time Received:** **04-Nov-2020 09:30**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	04-Nov-2020 12:08	**Reviewed by:**	/S/ RJ Modashia	04-Nov-2020 16:10
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.7C U/c	IR31
Cooler(s)/Kit(s):	46559	
Date/Time sample(s) sent to storage:	11/4/2020 12:15	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT
BI-WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O Number

HS20110121
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_110320	Water	11/03/20 / 14:00		3	3		HCL	
LH18/24-SP650_110320	Water	11/03/20 / 14:00		1		1	NONE	
Trip Blank	Water	11/03/20		2	2		HCL	

Additional Remarks: **Standard TAT on other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/03/20	14:30	JM	11/4/2020	09:30						

For Lab Use Only

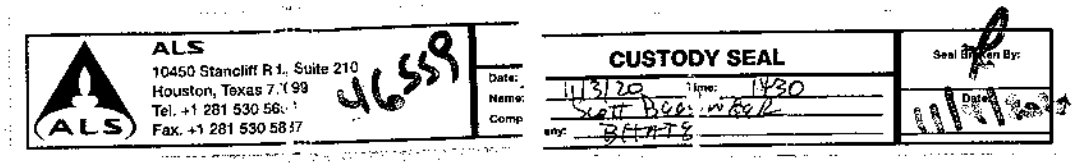
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

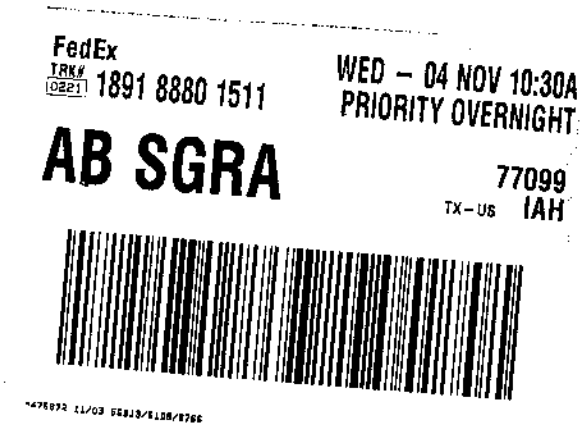
Remarks

46559 0.70 vic.

431

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
46559
Date:
Name:
Comp
any:
CUSTODY SEAL
11/3/20
Time:
1430
Scott Bee
BEATS
Seal Broken By:
Date:


FedEx
TRK#
0221
1891 8880 1511
WED – 04 NOV 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH

10450 Stancliff Rd. Suite 210
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November 25, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110505**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Nov 11, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20110505

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110505-01	LH18/24-SP650_111020	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐
HS20110505-02	LH18/24-SP650_111020_AIX	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐
HS20110505-03	Trip Blank	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20110505

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 159699

Sample ID: LH18/24-SP650_111020 (HS20110505-01)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

GCMS Volatiles by Method SW8260

Batch ID: R373272

Sample ID: HS20110985-28MS

• MS and MSD are for an unrelated sample

Metals by Method SW6020

Batch ID: 160046

Sample ID: HS20110561-04MSD

• MSD is for an unrelated sample

Sample ID: HS20110561-04PDS

• PDS is for an unrelated sample

WetChemistry by Method SW7196

Batch ID: R372488

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505
Sample ID: LH18/24-SP650_111020 Lab ID:HS20110505-01
Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 16:07
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 16:07
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 16:07
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 16:07
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 16:07
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505
Sample ID: LH18/24-SP650_111020 Lab ID:HS20110505-01
Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
cis-1,2-Dichloroethene	**8.9**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 16:07
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 16:07
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 16:07
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Trichloroethene	**0.88**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 16:07
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Surr: 1,2-Dichloroethane-d4	*84.7*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 16:07*
Surr: 4-Bromofluorobenzene	*92.4*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 16:07*
Surr: Dibromofluoromethane	*87.7*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 16:07*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 16:07*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 16-Nov-2020		Analyst: ACN
1,4-Dioxane	**3.3**	a	**1.0**	**0**	**1.0**	**ug/L**	100	25-Nov-2020 12:29
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*25-Nov-2020 12:29*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*25-Nov-2020 12:29*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*25-Nov-2020 12:29*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 24-Nov-2020		Analyst: JHD
Barium	**0.280**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	25-Nov-2020 12:34
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	25-Nov-2020 12:34
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	25-Nov-2020 12:34
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	25-Nov-2020 12:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505

Sample ID: LH18/24-SP650_111020 Lab ID:HS20110505-01

Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	11-Nov-2020 13:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505

Sample ID: LH18/24-SP650_111020_AIX Lab ID:HS20110505-02

Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	24-Nov-2020 15:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505
Sample ID: Trip Blank Lab ID:HS20110505-03
Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 15:46
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 15:46
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 15:46
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 15:46
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 15:46
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505

Sample ID: Trip Blank Lab ID:HS20110505-03

Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 15:46
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 15:46
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Surr: 1,2-Dichloroethane-d4	*84.4*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 15:46*
Surr: 4-Bromofluorobenzene	*87.8*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 15:46*
Surr: Dibromofluoromethane	*88.7*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 15:46*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 15:46*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

Batch ID: 159699 **Start Date:** 16 Nov 2020 09:00 **End Date:** 16 Nov 2020 16:00
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20110505-01		1000 (mL)	1 (mL)	0.001

Batch ID: 160046 **Start Date:** 24 Nov 2020 12:00 **End Date:** 24 Nov 2020 16:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20110505-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 159699 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20110505-01	LH18/24-SP650_111020	10 Nov 2020 14:00		16 Nov 2020 16:14	25 Nov 2020 12:29	100
Batch ID: 160046 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20110505-01	LH18/24-SP650_111020	10 Nov 2020 14:00		24 Nov 2020 16:00	25 Nov 2020 12:34	1
Batch ID: R372488 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20110505-01	LH18/24-SP650_111020	10 Nov 2020 14:00			11 Nov 2020 13:04	1
Batch ID: R373272 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20110505-01	LH18/24-SP650_111020	10 Nov 2020 14:00			23 Nov 2020 16:07	1
HS20110505-03	Trip Blank	10 Nov 2020 14:00			23 Nov 2020 15:46	1
Batch ID: R373325 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20110505-02	LH18/24-SP650_111020_AIX	10 Nov 2020 14:00			24 Nov 2020 15:48	1

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: 160046 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160046** Units: **mg/L** Analysis Date: **25-Nov-2020 12:16**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851858** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.00250	0.00500								U
Lead	0.00100	0.00500								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-160046** Units: **mg/L** Analysis Date: **25-Nov-2020 12:18**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851859** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.04714	0.00500	0.05	0	94.3	86 - 114				
Lead	0.04638	0.00500	0.05	0	92.8	88 - 115				
Selenium	0.04973	0.00500	0.05	0	99.5	80 - 120				
Silver	0.04742	0.00500	0.05	0	94.8	85 - 116				

MS Sample ID: **HS20110561-04MS** Units: **mg/L** Analysis Date: **25-Nov-2020 12:24**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851862** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.5371	0.00500	0.05	0.4828	108	86 - 114				O
Lead	0.05406	0.00500	0.05	0.000569	107	88 - 115				
Selenium	0.05892	0.00500	0.05	0.002902	112	80 - 120				
Silver	0.05115	0.00500	0.05	0.000021	102	85 - 116				

MSD Sample ID: **HS20110561-04MSD** Units: **mg/L** Analysis Date: **25-Nov-2020 12:26**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851863** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.5071	0.00500	0.05	0.4828	48.5	86 - 114	0.5371	5.74	20	SO
Lead	0.05248	0.00500	0.05	0.000569	104	88 - 115	0.05406	2.96	20	
Selenium	0.05995	0.00500	0.05	0.002902	114	80 - 120	0.05892	1.74	20	
Silver	0.049	0.00500	0.05	0.000021	98.0	85 - 116	0.05115	4.29	20	

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: 160046 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20110561-04PDS** Units: **mg/L** Analysis Date: **25-Nov-2020 12:32**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851865** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.5083	0.00500	0.1	0.4828	25.4	80 - 120				SO
Lead	0.086	0.00500	0.1	0.000569	85.4	80 - 120				
Selenium	0.09861	0.00500	0.1	0.002902	95.7	80 - 120				
Silver	0.08023	0.00500	0.1	0.000021	80.2	80 - 120				

SD Sample ID: **HS20110561-04SD** Units: **mg/L** Analysis Date: **25-Nov-2020 12:22**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851861** PrepDate: **24-Nov-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.4753	0.0250					0.4828	1.56	10	
Lead	0.00500	0.0250					0.000569	0	10	U
Selenium	0.0125	0.0250					0.002902	0	10	U
Silver	0.00250	0.0250					0.000021	0	10	U

The following samples were analyzed in this batch: HS20110505-01

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: 159699 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-159699** Units: **ug/L** Analysis Date: **25-Nov-2020 11:35**
Client ID: Run ID: **SV-6_373403** SeqNo: **5851420** PrepDate: **16-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0	0.010								U
Surr: 2-Fluorobiphenyl	*0.08633*	*0*	*0.08*	*0*	*108*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.1065*	*0*	*0.08*	*0*	*133*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07583*	*0*	*0.08*	*0*	*94.8*	*40 - 140*				

LCS Sample ID: **LCS-159699** Units: **ug/L** Analysis Date: **25-Nov-2020 11:53**
Client ID: Run ID: **SV-6_373403** SeqNo: **5851421** PrepDate: **16-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.054	0.010	0.08	0	67.5	40 - 140				
Surr: 2-Fluorobiphenyl	*0.09382*	*0*	*0.08*	*0*	*117*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.08942*	*0*	*0.08*	*0*	*112*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07976*	*0*	*0.08*	*0*	*99.7*	*40 - 140*				

LCSD Sample ID: **LCSD-159699** Units: **ug/L** Analysis Date: **25-Nov-2020 12:11**
Client ID: Run ID: **SV-6_373403** SeqNo: **5851422** PrepDate: **16-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.0595	0.010	0.08	0	74.4	40 - 140	0.054	9.69	20	
Surr: 2-Fluorobiphenyl	*0.1073*	*0*	*0.08*	*0*	*134*	*40 - 140*	*0.09382*	*13.4*	*20*	
Surr: 4-Terphenyl-d14	*0.1073*	*0*	*0.08*	*0*	*134*	*40 - 140*	*0.08942*	*18.2*	*20*	
Surr: Nitrobenzene-d5	*0.08118*	*0*	*0.08*	*0*	*101*	*40 - 140*	*0.07976*	*1.76*	*20*	

The following samples were analyzed in this batch: HS20110505-01

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLK-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 12:37**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848312** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLK-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 12:37**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848312** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*42.87*	*1.0*	*50*	*0*	*85.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*44.97*	*1.0*	*50*	*0*	*89.9*	*85 - 114*				
Surr: Dibromofluoromethane	*44.14*	*1.0*	*50*	*0*	*88.3*	*80 - 119*				
Surr: Toluene-d8	*51.72*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 11:55**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848311** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	17.82	1.0	20	0	89.1	78 - 124				
1,1,1-Trichloroethane	18.13	1.0	20	0	90.7	74 - 131				
1,1,2,2-Tetrachloroethane	21.56	1.0	20	0	108	71 - 121				
1,1,2-Trichloroethane	18.74	1.0	20	0	93.7	80 - 119				
1,1-Dichloroethane	18.26	1.0	20	0	91.3	77 - 125				
1,1-Dichloroethene	18.12	1.0	20	0	90.6	71 - 131				
1,1-Dichloropropene	17.16	1.0	20	0	85.8	78 - 125				
1,2,3-Trichlorobenzene	24.95	1.0	20	0	125	69 - 129				
1,2,3-Trichloropropane	21.14	1.0	20	0	106	73 - 122				
1,2,4-Trichlorobenzene	22.78	1.0	20	0	114	69 - 130				
1,2,4-Trimethylbenzene	16.92	1.0	20	0	84.6	76 - 124				
1,2-Dibromo-3-chloropropane	19.81	1.0	20	0	99.0	62 - 128				
1,2-Dibromoethane	19.61	1.0	20	0	98.1	77 - 121				
1,2-Dichlorobenzene	18.71	1.0	20	0	93.5	80 - 119				
1,2-Dichloroethane	19.65	1.0	20	0	98.3	73 - 128				
1,2-Dichloropropane	18.82	1.0	20	0	94.1	78 - 122				
1,3,5-Trimethylbenzene	15.18	1.0	20	0	75.9	75 - 124				
1,3-Dichlorobenzene	18.78	1.0	20	0	93.9	80 - 119				
1,3-Dichloropropane	19.59	1.0	20	0	97.9	80 - 119				
1,4-Dichlorobenzene	18.83	1.0	20	0	94.1	79 - 118				
2,2-Dichloropropane	17.55	1.0	20	0	87.8	60 - 139				
2-Butanone	41.98	2.0	40	0	105	56 - 143				
2-Chlorotoluene	17.56	1.0	20	0	87.8	79 - 122				
2-Hexanone	39.91	2.0	40	0	99.8	57 - 139				
4-Chlorotoluene	17.12	1.0	20	0	85.6	78 - 122				
4-Isopropyltoluene	15.65	1.0	20	0	78.2	77 - 127				
4-Methyl-2-pentanone	38.82	2.0	40	0	97.0	67 - 130				
Acetone	44.13	2.0	40	0	110	39 - 160				
Benzene	18.56	1.0	20	0	92.8	79 - 120				
Bromobenzene	20.16	1.0	20	0	101	80 - 120				
Bromochloromethane	19.37	1.0	20	0	96.8	78 - 123				
Bromodichloromethane	19.14	1.0	20	0	95.7	79 - 125				
Bromoform	19.18	1.0	20	0	95.9	66 - 130				
Bromomethane	20.55	1.0	20	0	103	53 - 141				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 11:55**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848311** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	35.25	2.0	40	0	88.1	64 - 133				
Carbon tetrachloride	16.47	1.0	20	0	82.4	72 - 136				
Chlorobenzene	17.68	1.0	20	0	88.4	82 - 118				
Chloroethane	16.92	1.0	20	0	84.6	60 - 138				
Chloroform	18.11	1.0	20	0	90.5	79 - 124				
Chloromethane	16.97	1.0	20	0	84.9	50 - 139				
cis-1,2-Dichloroethene	17.86	1.0	20	0	89.3	78 - 123				
cis-1,3-Dichloropropene	19.23	1.0	20	0	96.1	75 - 124				
Dibromochloromethane	20	1.0	20	0	100.0	74 - 126				
Dibromomethane	19.13	1.0	20	0	95.7	79 - 123				
Dichlorodifluoromethane	16.98	1.0	20	0	84.9	32 - 152				
Ethylbenzene	16.91	1.0	20	0	84.5	79 - 121				
Hexachlorobutadiene	17.29	1.0	20	0	86.5	66 - 134				
Isopropylbenzene	14.95	1.0	20	0	74.7	72 - 131				
m,p-Xylene	33.28	2.0	40	0	83.2	80 - 121				
Methylene chloride	18.17	2.0	20	0	90.8	74 - 124				
Naphthalene	25.57	1.0	20	0	128	61 - 128				
n-Butylbenzene	15.78	1.0	20	0	78.9	75 - 128				
n-Propylbenzene	15.86	1.0	20	0	79.3	76 - 126				
o-Xylene	17.69	1.0	20	0	88.4	78 - 122				
sec-Butylbenzene	15.72	1.0	20	0	78.6	77 - 126				
Styrene	17.1	1.0	20	0	85.5	78 - 123				
tert-Butylbenzene	15.69	1.0	20	0	78.5	78 - 124				
Tetrachloroethene	15.63	1.0	20	0	78.2	74 - 129				
Toluene	17.55	1.0	20	0	87.7	80 - 121				
trans-1,2-Dichloroethene	17.15	1.0	20	0	85.8	75 - 124				
trans-1,3-Dichloropropene	19.55	1.0	20	0	97.7	73 - 127				
Trichloroethene	17.74	1.0	20	0	88.7	79 - 123				
Trichlorofluoromethane	16.27	1.0	20	0	81.4	65 - 141				
Vinyl chloride	17.08	1.0	20	0	85.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.39*	*1.0*	*50*	*0*	*96.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.18*	*1.0*	*50*	*0*	*94.4*	*85 - 114*				
Surr: Dibromofluoromethane	*50.74*	*1.0*	*50*	*0*	*101*	*80 - 119*				
Surr: Toluene-d8	*49.17*	*1.0*	*50*	*0*	*98.3*	*89 - 112*				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20110985-28MS** Units: **UG/L** Analysis Date: **23-Nov-2020 17:31**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848326** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	22.54	1.0	20	2.818	98.6	78 - 124				
1,1,1-Trichloroethane	18.66	1.0	20	0	93.3	74 - 131				
1,1,2,2-Tetrachloroethane	22.31	1.0	20	0	112	71 - 121				
1,1,2-Trichloroethane	29.52	1.0	20	10.65	94.4	80 - 119				
1,1-Dichloroethane	16.99	1.0	20	0	84.9	77 - 125				
1,1-Dichloroethene	18.15	1.0	20	0	90.7	71 - 131				
1,1-Dichloropropene	18.51	1.0	20	0	92.6	78 - 125				
1,2,3-Trichlorobenzene	26.82	1.0	20	0	134	69 - 129				S
1,2,3-Trichloropropane	22.18	1.0	20	0	111	73 - 122				
1,2,4-Trichlorobenzene	23.56	1.0	20	0	118	69 - 130				
1,2,4-Trimethylbenzene	23.4	1.0	20	0	117	76 - 124				
1,2-Dibromo-3-chloropropane	24.4	1.0	20	0	122	62 - 128				
1,2-Dibromoethane	18.44	1.0	20	0	92.2	77 - 121				
1,2-Dichlorobenzene	21.59	1.0	20	0	108	80 - 119				
1,2-Dichloroethane	17.79	1.0	20	0	88.9	73 - 128				
1,2-Dichloropropane	17.39	1.0	20	0	87.0	78 - 122				
1,3,5-Trimethylbenzene	21.02	1.0	20	0	105	75 - 124				
1,3-Dichlorobenzene	22.07	1.0	20	0	110	80 - 119				
1,3-Dichloropropane	19.42	1.0	20	0	97.1	80 - 119				
1,4-Dichlorobenzene	22.85	1.0	20	0	114	79 - 118				
2,2-Dichloropropane	17.02	1.0	20	0	85.1	60 - 139				
2-Butanone	34.9	2.0	40	0	87.2	56 - 143				
2-Chlorotoluene	21.64	1.0	20	0	108	79 - 122				
2-Hexanone	39.81	2.0	40	0	99.5	57 - 139				
4-Chlorotoluene	21.2	1.0	20	0	106	78 - 122				
4-Isopropyltoluene	22.43	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	36.49	2.0	40	0	91.2	67 - 130				
Acetone	40.08	2.0	40	0	100	39 - 160				
Benzene	18.4	1.0	20	0	92.0	79 - 120				
Bromobenzene	22.69	1.0	20	0	113	80 - 120				
Bromochloromethane	16.07	1.0	20	0	80.3	78 - 123				
Bromodichloromethane	17.83	1.0	20	0	89.2	79 - 125				
Bromoform	19.13	1.0	20	0	95.6	66 - 130				
Bromomethane	19.39	1.0	20	0	97.0	53 - 141				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20110985-28MS** Units: **UG/L** Analysis Date: **23-Nov-2020 17:31**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848326** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	32.34	2.0	40	0	80.8	64 - 133				
Carbon tetrachloride	19.1	1.0	20	0	95.5	72 - 136				
Chlorobenzene	19.73	1.0	20	0	98.7	82 - 118				
Chloroethane	16.65	1.0	20	0	83.2	60 - 138				
Chloroform	18.54	1.0	20	1.714	84.1	79 - 124				
Chloromethane	14.3	1.0	20	0	71.5	50 - 139				
cis-1,2-Dichloroethene	16.81	1.0	20	0	84.0	78 - 123				
cis-1,3-Dichloropropene	16.71	1.0	20	0	83.5	75 - 124				
Dibromochloromethane	18.57	1.0	20	0	92.8	74 - 126				
Dibromomethane	17.78	1.0	20	0	88.9	79 - 123				
Dichlorodifluoromethane	14.47	1.0	20	0	72.4	32 - 152				
Ethylbenzene	19.88	1.0	20	0	99.4	79 - 121				
Hexachlorobutadiene	25.08	1.0	20	0	125	66 - 134				
Isopropylbenzene	20.35	1.0	20	0	102	72 - 131				
m,p-Xylene	38.57	2.0	40	0	96.4	80 - 121				
Methylene chloride	16.17	2.0	20	0	80.9	74 - 124				
Naphthalene	22.45	1.0	20	0	112	61 - 128				
n-Butylbenzene	22.46	1.0	20	0	112	75 - 128				
n-Propylbenzene	22.67	1.0	20	0	113	76 - 126				
o-Xylene	19.27	1.0	20	0	96.3	78 - 122				
sec-Butylbenzene	24.26	1.0	20	0	121	77 - 126				
Styrene	5.633	1.0	20	0	28.2	78 - 123				S
tert-Butylbenzene	22.59	1.0	20	0	113	78 - 124				
Tetrachloroethene	37.42	1.0	20	15.34	110	74 - 129				
Toluene	20.14	1.0	20	0	101	80 - 121				
trans-1,2-Dichloroethene	16.32	1.0	20	0	81.6	75 - 124				
trans-1,3-Dichloropropene	17.13	1.0	20	0	85.7	73 - 127				
Trichloroethene	175.8	1.0	20	150.6	126	79 - 123				SO
Trichlorofluoromethane	18.91	1.0	20	0	94.5	65 - 141				
Vinyl chloride	16.8	1.0	20	0	84.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44*	*1.0*	*50*	*0*	*88.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.22*	*1.0*	*50*	*0*	*90.4*	*85 - 114*				
Surr: Dibromofluoromethane	*46.57*	*1.0*	*50*	*0*	*93.1*	*80 - 119*				
Surr: Toluene-d8	*51.46*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20110985-28MSD** Units: **UG/L** Analysis Date: **23-Nov-2020 17:52**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848327** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.64	1.0	20	2.818	89.1	78 - 124	22.54	8.84	20	
1,1,1-Trichloroethane	17.85	1.0	20	0	89.3	74 - 131	18.66	4.39	20	
1,1,2,2-Tetrachloroethane	20.87	1.0	20	0	104	71 - 121	22.31	6.66	20	
1,1,2-Trichloroethane	28.54	1.0	20	10.65	89.5	80 - 119	29.52	3.38	20	
1,1-Dichloroethane	16.68	1.0	20	0	83.4	77 - 125	16.99	1.83	20	
1,1-Dichloroethene	16.32	1.0	20	0	81.6	71 - 131	18.15	10.6	20	
1,1-Dichloropropene	17.27	1.0	20	0	86.3	78 - 125	18.51	6.94	20	
1,2,3-Trichlorobenzene	27.06	1.0	20	0	135	69 - 129	26.82	0.873	20	S
1,2,3-Trichloropropane	18.84	1.0	20	0	94.2	73 - 122	22.18	16.3	20	
1,2,4-Trichlorobenzene	22.93	1.0	20	0	115	69 - 130	23.56	2.7	20	
1,2,4-Trimethylbenzene	20.3	1.0	20	0	101	76 - 124	23.4	14.2	20	
1,2-Dibromo-3-chloropropane	23.19	1.0	20	0	116	62 - 128	24.4	5.05	20	
1,2-Dibromoethane	17.56	1.0	20	0	87.8	77 - 121	18.44	4.9	20	
1,2-Dichlorobenzene	19.38	1.0	20	0	96.9	80 - 119	21.59	10.8	20	
1,2-Dichloroethane	17.47	1.0	20	0	87.4	73 - 128	17.79	1.78	20	
1,2-Dichloropropane	17.08	1.0	20	0	85.4	78 - 122	17.39	1.81	20	
1,3,5-Trimethylbenzene	18.92	1.0	20	0	94.6	75 - 124	21.02	10.5	20	
1,3-Dichlorobenzene	20.13	1.0	20	0	101	80 - 119	22.07	9.21	20	
1,3-Dichloropropane	18.59	1.0	20	0	92.9	80 - 119	19.42	4.38	20	
1,4-Dichlorobenzene	19.68	1.0	20	0	98.4	79 - 118	22.85	14.9	20	
2,2-Dichloropropane	16.21	1.0	20	0	81.1	60 - 139	17.02	4.87	20	
2-Butanone	35.35	2.0	40	0	88.4	56 - 143	34.9	1.3	20	
2-Chlorotoluene	19.08	1.0	20	0	95.4	79 - 122	21.64	12.5	20	
2-Hexanone	36.97	2.0	40	0	92.4	57 - 139	39.81	7.41	20	
4-Chlorotoluene	18.45	1.0	20	0	92.3	78 - 122	21.2	13.9	20	
4-Isopropyltoluene	20.29	1.0	20	0	101	77 - 127	22.43	10.1	20	
4-Methyl-2-pentanone	36.48	2.0	40	0	91.2	67 - 130	36.49	0.0236	20	
Acetone	36.65	2.0	40	0	91.6	39 - 160	40.08	8.94	20	
Benzene	17.84	1.0	20	0	89.2	79 - 120	18.4	3.07	20	
Bromobenzene	19.79	1.0	20	0	99.0	80 - 120	22.69	13.6	20	
Bromochloromethane	16.22	1.0	20	0	81.1	78 - 123	16.07	0.94	20	
Bromodichloromethane	17.89	1.0	20	0	89.5	79 - 125	17.83	0.343	20	
Bromoform	18.39	1.0	20	0	91.9	66 - 130	19.13	3.94	20	
Bromomethane	17.82	1.0	20	0	89.1	53 - 141	19.39	8.47	20	

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20110985-28MSD** Units: **UG/L** Analysis Date: **23-Nov-2020 17:52**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848327** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	30.34	2.0	40	0	75.9	64 - 133	32.34	6.36	20	
Carbon tetrachloride	18.14	1.0	20	0	90.7	72 - 136	19.1	5.16	20	
Chlorobenzene	17.8	1.0	20	0	89.0	82 - 118	19.73	10.3	20	
Chloroethane	15.56	1.0	20	0	77.8	60 - 138	16.65	6.76	20	
Chloroform	17.51	1.0	20	1.714	79.0	79 - 124	18.54	5.71	20	S
Chloromethane	13.94	1.0	20	0	69.7	50 - 139	14.3	2.54	20	
cis-1,2-Dichloroethene	15.95	1.0	20	0	79.8	78 - 123	16.81	5.23	20	
cis-1,3-Dichloropropene	16.37	1.0	20	0	81.8	75 - 124	16.71	2.04	20	
Dibromochloromethane	18.17	1.0	20	0	90.9	74 - 126	18.57	2.15	20	
Dibromomethane	18.25	1.0	20	0	91.3	79 - 123	17.78	2.59	20	
Dichlorodifluoromethane	13.47	1.0	20	0	67.4	32 - 152	14.47	7.16	20	
Ethylbenzene	18.68	1.0	20	0	93.4	79 - 121	19.88	6.23	20	
Hexachlorobutadiene	23.52	1.0	20	0	118	66 - 134	25.08	6.39	20	
Isopropylbenzene	18.83	1.0	20	0	94.2	72 - 131	20.35	7.76	20	
m,p-Xylene	35.84	2.0	40	0	89.6	80 - 121	38.57	7.33	20	
Methylene chloride	15.8	2.0	20	0	79.0	74 - 124	16.17	2.36	20	
Naphthalene	23.92	1.0	20	0	120	61 - 128	22.45	6.37	20	
n-Butylbenzene	20.53	1.0	20	0	103	75 - 128	22.46	8.99	20	
n-Propylbenzene	20.38	1.0	20	0	102	76 - 126	22.67	10.7	20	
o-Xylene	17.8	1.0	20	0	89.0	78 - 122	19.27	7.92	20	
sec-Butylbenzene	21.28	1.0	20	0	106	77 - 126	24.26	13.1	20	
Styrene	5.242	1.0	20	0	26.2	78 - 123	5.633	7.19	20	S
tert-Butylbenzene	20.43	1.0	20	0	102	78 - 124	22.59	10	20	
Tetrachloroethene	34.95	1.0	20	15.34	98.0	74 - 129	37.42	6.81	20	
Toluene	18.66	1.0	20	0	93.3	80 - 121	20.14	7.64	20	
trans-1,2-Dichloroethene	15.18	1.0	20	0	75.9	75 - 124	16.32	7.24	20	
trans-1,3-Dichloropropene	17.13	1.0	20	0	85.6	73 - 127	17.13	0.0315	20	
Trichloroethene	168	1.0	20	150.6	87.1	79 - 123	175.8	4.51	20	O
Trichlorofluoromethane	17.33	1.0	20	0	86.6	65 - 141	18.91	8.74	20	
Vinyl chloride	14.05	1.0	20	0	70.2	58 - 137	16.8	17.9	20	
Surr: 1,2-Dichloroethane-d4	*44.77*	*1.0*	*50*	*0*	*89.5*	*81 - 118*	*44*	*1.75*	*20*	
Surr: 4-Bromofluorobenzene	*46.47*	*1.0*	*50*	*0*	*92.9*	*85 - 114*	*45.22*	*2.71*	*20*	
Surr: Dibromofluoromethane	*46.06*	*1.0*	*50*	*0*	*92.1*	*80 - 119*	*46.57*	*1.1*	*20*	
Surr: Toluene-d8	*50.43*	*1.0*	*50*	*0*	*101*	*89 - 112*	*51.46*	*2.02*	*20*	

ALS Houston, US Date: 25-Nov-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:	HS20110505

QC BATCH REPORT

Batch ID:	**R373272 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20110505-01 HS20110505-03

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R372488 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R372488** Units: **mg/L** Analysis Date: **11-Nov-2020 13:00**
Client ID: Run ID: **UV-2450_372488** SeqNo: **5828930** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R372488** Units: **mg/L** Analysis Date: **11-Nov-2020 13:00**
Client ID: Run ID: **UV-2450_372488** SeqNo: **5828929** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.243	0.0100	0.25	0	97.2	90 - 111				

MS Sample ID: **HS20110505-01MS** Units: **mg/L** Analysis Date: **11-Nov-2020 13:05**
Client ID: **LH18/24-SP650_111020** Run ID: **UV-2450_372488** SeqNo: **5828932** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.245	0.0100	0.25	0	98.0	90 - 111				

MSD Sample ID: **HS20110505-01MSD** Units: **mg/L** Analysis Date: **11-Nov-2020 13:06**
Client ID: **LH18/24-SP650_111020** Run ID: **UV-2450_372488** SeqNo: **5828931** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.246	0.0100	0.25	0	98.4	90 - 111	0.245	0.407	20	

The following samples were analyzed in this batch: HS20110505-01

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: **HS20110505**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20110505

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110505-01	LH18/24-SP650_111020	Login	11/11/2020 11:58:05 AM	PMG	EXT132
HS20110505-01	LH18/24-SP650_111020	Login	11/11/2020 11:58:05 AM	PMG	WET130
HS20110505-01	LH18/24-SP650_111020	Login	11/11/2020 11:58:05 AM	PMG	MET061
HS20110505-01	LH18/24-SP650_111020	Login	11/11/2020 11:58:05 AM	PMG	VOA107
HS20110505-02	LH18/24-SP650_111020_AIX	Login	11/11/2020 11:58:05 AM	PMG	Sub
HS20110505-03	Trip Blank	Login	11/11/2020 11:58:05 AM	PMG	VOA107

ALS Houston, US Date: 25-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110505 **Date/Time Received:** **11-Nov-2020 10:20**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	11-Nov-2020 12:05	**Reviewed by:**	/S/ RJ Modashia	11-Nov-2020 15:25
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.9C U/C	IR25
Cooler(s)/Kit(s):	46545	
Date/Time sample(s) sent to storage:	11/11/2020 12:15	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX 77099 (281) 530 – 5656 ATTN: RJ Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20110505
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Effluent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOLATILES	SILVER, SELENIUM, LEAD, BARIUM	HEXAVALENT CHROMIUM	1, 4 - DIOXANE	PERCHLORATE					Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_111020	Water	11/10/20 / 14:00		3	X									HCL	
LH18/24-SP650_111020	Water	11/10/20 / 14:00		2			X	X						NONE	
LH18/24-SP650_111020_AIX	Water	11/10/20 / 14:00		1					X					NONE	
LH18/24-SP650_111020	Water	11/10/20 / 14:00		1		X								HNO3	
Trip Blank	Water	11/10/20		2	X									HCL	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/10/20	14:30	[illegible]	11/11/2020	10:20						

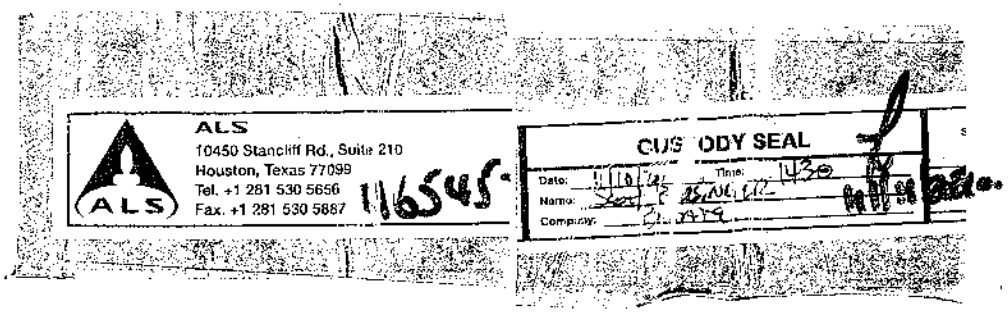
For Lab Use Only

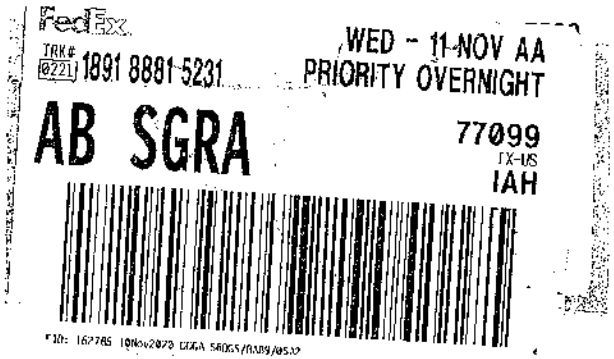
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

46 sw 0.90 ft 25 ft 25.

11/11/2020


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
116545
CUSTODY SEAL
Date:
Time:
Name:
Company:


FedEx
TRK# 0221 1891 8881 5231
WED - 11 NOV AA
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH

November 24, 2020 Service Request No:E2001102

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20110505

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 11, 2020
For your reference, these analyses have been assigned our service request number **E2001102.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001102
Project:	HS20110505	**Date Received:**	11/11/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/11/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000600: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001102
Project: HS20110505

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001102-001	LH18/24-SP650_111020_AIX	11/10/2020	1400

Service Request Summary

Folder #: **E2001102**
Client Name: ALS Environmental - US
Project Name: HS20110505
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/11/20
Internal Due Date: 11/25/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110505
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001102-001	LH18/24-SP650_111020_AIX	Water	11/10/20 1400	**IV**

Service Request Summary

Folder #: **E2001102**
Client Name: ALS Environmental - US
Project Name: HS20110505
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/11/20
Internal Due Date: 11/25/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110505
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 11/25,level IV due 12/4

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
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www.alsglobal.com

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Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15134**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110505
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110505-02**	**LH18/24-SP650_111020_AIX**	**Water**	**10 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			25 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 11/11/20 12:47

Received By: [signature] Date/Time: 11/11/20 12:47

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-H

Thermometer ID 1251

Date/Time Received: 11/11/20 Initials: CG Date/Time Logged in: 11/11/20 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client
2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?
4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		11/11/20	1247	JM	1.9	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 370006 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/18/20 13:54

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001101-001	LH18/24-SP140_111020	.01	6850/ClO4 DOD			Water	10mL	
2	E2001102-001	LH18/24-SP650_111020_AIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001103-001	LH18/24-SP650_111020_AIX	.01	6850/ClO4 DOD			Water	10mL	
4	EQ2000600-01	MB		6850/ClO4 DOD			Liquid	10mL	
5	EQ2000600-02	LCS		6850/ClO4 DOD			Liquid	10mL	
6	EQ2000600-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 213952 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001101-001 100.00µL E2001102-001 100.00µL E2001103-001 100.00µL EQ2000600-01 100.00µL EQ2000600-02 100.00µL EQ2000600-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000600-02 1.00µL EQ2000600-03 1.00µL

Preparation Steps

Step: Preparation
Started: 11/18/20 13:54
Finished: 11/18/20 15:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 11/18/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Collected:**	11/10/20 1400
Sample Matrix:	Water	**Date Received:**	11/11/20
Sample Name:	LH18/24-SP650_111020_AIX	**Units:**	µg/L
Lab Code:	E2001102-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**6.67**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 11:26	370006	704787	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000600-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/18/20	11/24/20 10:11	370006	704787	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Analyzed:**	11/24/20
Sample Matrix:	Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	370006

	Lab Control Sample EQ2000600-02			Duplicate Lab Control Sample EQ2000600-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.103	0.100	103	84 - 119	8	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000600-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 10:19	370006	704787	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000600-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.103**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 11:18	370006	704787	

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 25, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110507**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Influent Samples**

Dear Marcia Olive,

ALS Environmental received 1 sample(s) on Nov 11, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20110507

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110507-01	LH18/24-SP140_111020	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20110507

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

Metals by Method SW6020

Batch ID: 160046

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW7196

Batch ID: R372488

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Influent Samples WorkOrder:HS20110507

Sample ID: LH18/24-SP140_111020 Lab ID:HS20110507-01

Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 24-Nov-2020		Analyst: JHD
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	25-Nov-2020 12:54
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	25-Nov-2020 12:54
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	11-Nov-2020 13:03
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	24-Nov-2020 15:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20110507

Batch ID: 160046 **Start Date:** 24 Nov 2020 12:00 **End Date:** 24 Nov 2020 16:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20110507-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20110507

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160046 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20110507-01	LH18/24-SP140_111020	10 Nov 2020 14:00		24 Nov 2020 16:00	25 Nov 2020 12:54	1
Batch ID: R372488 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20110507-01	LH18/24-SP140_111020	10 Nov 2020 14:00			11 Nov 2020 13:03	1
Batch ID: R373325 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20110507-01	LH18/24-SP140_111020	10 Nov 2020 14:00			24 Nov 2020 15:48	1

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20110507

QC BATCH REPORT

Batch ID: 160046 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160046** Units: **mg/L** Analysis Date: **25-Nov-2020 12:16**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851858** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-160046** Units: **mg/L** Analysis Date: **25-Nov-2020 12:18**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851859** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04973	0.00500	0.05	0	99.5	80 - 120				
Silver	0.04742	0.00500	0.05	0	94.8	85 - 116				

MS Sample ID: **HS20110561-04MS** Units: **mg/L** Analysis Date: **25-Nov-2020 12:24**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851862** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05892	0.00500	0.05	0.002902	112	80 - 120				
Silver	0.05115	0.00500	0.05	0.000021	102	85 - 116				

MSD Sample ID: **HS20110561-04MSD** Units: **mg/L** Analysis Date: **25-Nov-2020 12:26**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851863** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05995	0.00500	0.05	0.002902	114	80 - 120	0.05892	1.74	20	
Silver	0.049	0.00500	0.05	0.000021	98.0	85 - 116	0.05115	4.29	20	

PDS Sample ID: **HS20110561-04PDS** Units: **mg/L** Analysis Date: **25-Nov-2020 12:32**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851865** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.09861	0.00500	0.1	0.002902	95.7	80 - 120				
Silver	0.08023	0.00500	0.1	0.000021	80.2	80 - 120				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20110507

QC BATCH REPORT

Batch ID: 160046 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20110561-04SD** Units: **mg/L** Analysis Date: **25-Nov-2020 12:22**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851861** PrepDate: **24-Nov-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Selenium	0.0125	0.0250					0.002902	0	10	U
Silver	0.00250	0.0250					0.000021	0	10	U

The following samples were analyzed in this batch: HS20110507-01

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20110507

QC BATCH REPORT

Batch ID: R372488 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R372488** Units: **mg/L** Analysis Date: **11-Nov-2020 13:00**
Client ID: Run ID: **UV-2450_372488** SeqNo: **5828930** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R372488** Units: **mg/L** Analysis Date: **11-Nov-2020 13:00**
Client ID: Run ID: **UV-2450_372488** SeqNo: **5828929** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.243	0.0100	0.25	0	97.2	90 - 111				

MS Sample ID: **HS20110505-01MS** Units: **mg/L** Analysis Date: **11-Nov-2020 13:05**
Client ID: Run ID: **UV-2450_372488** SeqNo: **5828932** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.245	0.0100	0.25	0	98.0	90 - 111				

MSD Sample ID: **HS20110505-01MSD** Units: **mg/L** Analysis Date: **11-Nov-2020 13:06**
Client ID: Run ID: **UV-2450_372488** SeqNo: **5828931** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.246	0.0100	0.25	0	98.4	90 - 111	0.245	0.407	20	

The following samples were analyzed in this batch: HS20110507-01

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: **HS20110507**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20110507

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110507-01	LH18/24-SP140_111020	Login	11/11/2020 12:15:11 PM	PMG	MET061
HS20110507-01	LH18/24-SP140_111020	Login	11/11/2020 12:15:11 PM	PMG	Sub
HS20110507-01	LH18/24-SP140_111020	Login	11/11/2020 12:15:11 PM	PMG	WET130

ALS Houston, US Date: 25-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110507 **Date/Time Received:** **11-Nov-2020 10:20**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Paresh M. Giga* (eSignature) 11-Nov-2020 12:18 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 11-Nov-2020 16:17 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.9C U/C	IR25	
Cooler(s)/Kit(s):	46545		
Date/Time sample(s) sent to storage:	11/11/2020 12:25		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: RJ Modashia

Page 1 of 1

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job:
GROUNDWATER TREATMENT PLANT MONTHLY INFLUENT SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20110507
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Influent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: SILVER & SELENIUM	HEXAVALENT CHROMIUM	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP140_111020	Water	11/10/20 / 14:00		1	X			HNO3	
LH18/24-SP140_111020	Water	11/10/20 / 14:00		2		X	X	NONE	

Additional Remarks: STANDARD TURN AROUND TIME

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/10/20	14:30	JM	11/11/2020	10:25						

For Lab Use Only

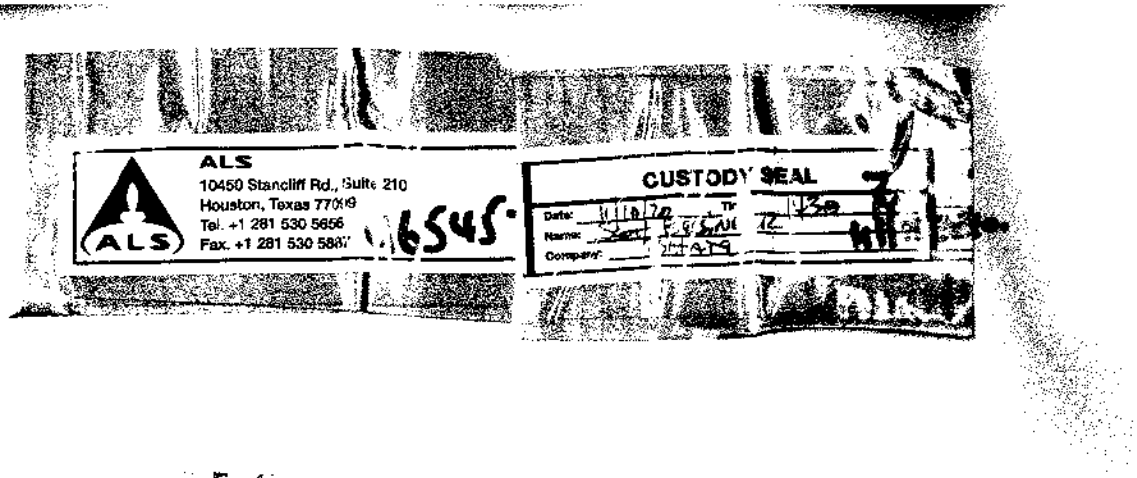
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

o.k.

46545 090
#31

(Word) S:\I-ees\Forms\Chain of Custody - BiWeekly CF-00


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
6545
CUSTODY SEAL
Date:
Name:
Company:


Fed
TRK# 0221 1891 8881 5231
WED - 11 NOV AA
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH

November 24, 2020 Service Request No:E2001101

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20110507

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 11, 2020
For your reference, these analyses have been assigned our service request number **E2001101.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001101
Project:	HS20110507	**Date Received:**	11/11/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/11/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000600: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001101
Project: HS20110507

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001101-001	LH18/24-SP140_111020	11/10/2020	1400

Service Request Summary

Folder #: **E2001101**
Client Name: ALS Environmental - US
Project Name: HS20110507
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/11/20
Internal Due Date: 11/25/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110507
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001101-001	LH18/24-SP140_111020	Water	11/10/20 1400	**IV**

Service Request Summary

Folder #: **E2001101**
Client Name: ALS Environmental - US
Project Name: HS20110507
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/11/20
Internal Due Date: 11/25/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110507
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 11/25,level IV due 12/4

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15135**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110507
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110507-01**	**LH18/24-SP140_111020**	**Water**	**10 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			25 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mwenny Date/Time: 11/11/20 12:47

Received By: Date/Time: 11/11/20 12:47

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1241

Date/Time Received: 11/11/20 Initials: CH

Date/Time Logged in: 11/11/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		11/11/20	1247	JM	1.9	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

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10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 370006 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/18/20 13:54

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001101-001	LH18/24-SP140_111020	.01	6850/ClO4 DOD			Water	10mL	
2	E2001102-001	LH18/24-SP650_111020_AIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001103-001	LH18/24-SP650_111020_AIX	.01	6850/ClO4 DOD			Water	10mL	
4	EQ2000600-01	MB		6850/ClO4 DOD			Liquid	10mL	
5	EQ2000600-02	LCS		6850/ClO4 DOD			Liquid	10mL	
6	EQ2000600-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 213952 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001101-001 100.00µL E2001102-001 100.00µL E2001103-001 100.00µL EQ2000600-01 100.00µL EQ2000600-02 100.00µL EQ2000600-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000600-02 1.00µL EQ2000600-03 1.00µL

Preparation Steps

Step: Preparation
Started: 11/18/20 13:54
Finished: 11/18/20 15:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 11/18/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001101
Project:	HS20110507	**Date Collected:**	11/10/20 1400
Sample Matrix:	Water	**Date Received:**	11/11/20
Sample Name:	LH18/24-SP140_111020	**Units:**	µg/L
Lab Code:	E2001101-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**9440**		40.0	20.0	10.0	400	11/18/20	11/24/20 11:42	370006	704787	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001101
Project:	HS20110507	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000600-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/18/20	11/24/20 10:11	370006	704787	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110507
Sample Matrix: Water

Service Request: E2001101
Date Analyzed: 11/24/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 370006

	Lab Control Sample EQ2000600-02			Duplicate Lab Control Sample EQ2000600-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.103	0.100	103	84 - 119	8	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001101
Project:	HS20110507	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000600-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 10:19	370006	704787	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001101
Project:	HS20110507	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000600-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.103**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 11:18	370006	704787	

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November 29, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110510**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 11, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110510

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110510-01	LH18/24-SP650_111020	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐
HS20110510-02	LH18/24-SP650_111020-AIX	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110510

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

WetChemistry by Method E350.3

Batch ID: R372766

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R372485

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20110510
Sample ID: LH18/24-SP650_111020
Lab ID:HS20110510-01
Collection Date: 10-Nov-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**14**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	17-Nov-2020 12:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: KVL
Phosphorus, Total Orthophosphate (As P)	**3.10**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	11-Nov-2020 16:38
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	25-Nov-2020 10:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20110510
Sample ID: LH18/24-SP650_111020-AIX
Lab ID:HS20110510-02
Collection Date: 10-Nov-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	24-Nov-2020 15:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110510

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R372485 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20110510-01	LH18/24-SP650_111020	10 Nov 2020 14:00			11 Nov 2020 16:38	10
Batch ID: R372766 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20110510-01	LH18/24-SP650_111020	10 Nov 2020 14:00			17 Nov 2020 12:00	1
Batch ID: R373325 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20110510-02	LH18/24-SP650_111020-AIX	10 Nov 2020 14:00			24 Nov 2020 15:48	1
Batch ID: R373378 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20110510-01	LH18/24-SP650_111020	10 Nov 2020 14:00			25 Nov 2020 10:35	1

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110510

QC BATCH REPORT

Batch ID: R372485 (0) **Instrument: UV-2450** **Method: ORTHO PHOSPHATE (PO4) AS P BY E365.3**

MBLK Sample ID: **MBLK-R372485** Units: **mg/L** Analysis Date: **11-Nov-2020 16:30**
Client ID: Run ID: **UV-2450_372485** SeqNo: **5828869** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-R372485** Units: **mg/L** Analysis Date: **11-Nov-2020 16:30**
Client ID: Run ID: **UV-2450_372485** SeqNo: **5828868** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.267	0.0250	0.25	0	107	85 - 115				

MS Sample ID: **HS20110506-01MS** Units: **mg/L** Analysis Date: **11-Nov-2020 16:35**
Client ID: Run ID: **UV-2450_372485** SeqNo: **5828877** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.325	0.0250	0.25	0.054	108	80 - 120				

MSD Sample ID: **HS20110506-01MSD** Units: **mg/L** Analysis Date: **11-Nov-2020 16:36**
Client ID: Run ID: **UV-2450_372485** SeqNo: **5828876** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.327	0.0250	0.25	0.054	109	80 - 120	0.325	0.613	20	

The following samples were analyzed in this batch: HS20110510-01

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110510

QC BATCH REPORT

Batch ID: R372766 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-372766** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835939** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-372766** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835940** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.22	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20110452-01MS** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835942** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.09	0.20	10	0.335	97.5	80 - 120				

MSD Sample ID: **HS20110452-01MSD** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835943** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.07	0.20	10	0.335	97.3	80 - 120	10.09	0.189	20	

The following samples were analyzed in this batch: HS20110510-01

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20110510**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 29-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110510

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110510-01	LH18/24-SP650_111020	Login	11/11/2020 12:28:53 PM	PMG	WET400
HS20110510-01	LH18/24-SP650_111020	Login	11/11/2020 12:28:53 PM	PMG	WET400
HS20110510-01	LH18/24-SP650_111020	Login	11/11/2020 12:28:53 PM	PMG	Sub
HS20110510-02	LH18/24-SP650_111020-AIX	Login	11/11/2020 12:28:53 PM	PMG	Sub

ALS Houston, US Date: 29-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110510 **Date/Time Received:** **11-Nov-2020 10:20**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Paresh M. Giga* (eSignature) 11-Nov-2020 12:30 (Date/Time) **Reviewed by:** (eSignature) (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.9C U/C	IR25
Cooler(s)/Kit(s):	46545	
Date/Time sample(s) sent to storage:	11/11/2020 12:40	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

HS20110510
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_111020	Water	11/10/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_111020	Water	11/10/20 / 14:00		1			X		NONE	
LH18/24-SP650_111020_AIX	Water	11/10/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/10/20	14:30	JM L	11/11/2020	10:20						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

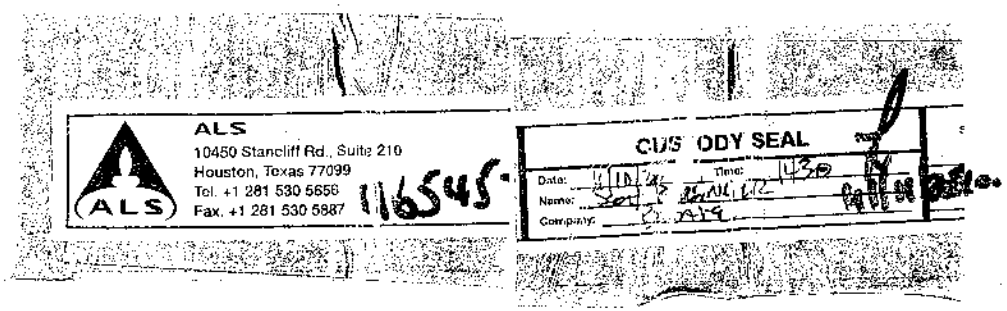
Remarks:

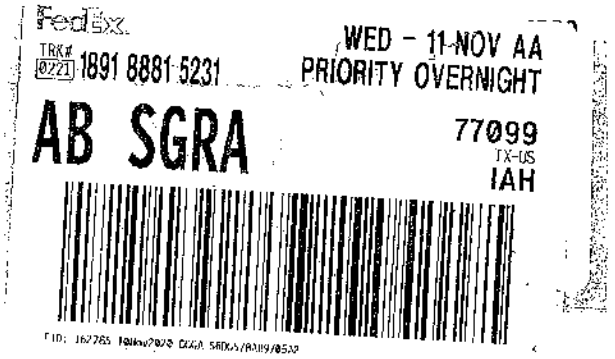
etc.

46545 0.9°

#25

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
116545
CUSTODY SEAL
Date:
Time:
Name:
Company:


FedEx
TRK#
0221
1891 8881 5231
WED - 11 NOV AA
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH

November 24, 2020 Service Request No:E2001103

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20110510

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 11, 2020
For your reference, these analyses have been assigned our service request number **E2001103.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001103
Project:	HS20110510	**Date Received:**	11/11/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/11/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000600: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001103
Project: HS20110510

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001103-001	LH18/24-SP650_111020_AIX	11/10/2020	1400

Service Request Summary

Folder #: **E2001103**
Client Name: ALS Environmental - US
Project Name: HS20110510
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/11/20
Internal Due Date: 11/25/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110510
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001103-001	LH18/24-SP650_111020_AIX	Water	11/10/20 1400	**IV**

Service Request Summary

Folder #: **E2001103**
Client Name: ALS Environmental - US
Project Name: HS20110510
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/11/20
Internal Due Date: 11/25/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110510
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 11/25,level IV due 12/4

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15137**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110510
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110510-02**	**LH18/24-SP650_111020-AIX**	**Water**	**10 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			25 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. MARCOTTE Date/Time: 11/11/20 12:47

Received By: Date/Time: 11/11/20 12:47

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1251

Date/Time Received: 11/11/20 Initials: CH Date/Time Logged in: 11/11/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ Courier (ALS) ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		11/11/20	1247	JM	1.9	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 370006 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/18/20 13:54

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001101-001	LH18/24-SP140_111020	.01	6850/ClO4 DOD			Water	10mL	
2	E2001102-001	LH18/24-SP650_111020_AIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001103-001	LH18/24-SP650_111020_AIX	.01	6850/ClO4 DOD			Water	10mL	
4	EQ2000600-01	MB		6850/ClO4 DOD			Liquid	10mL	
5	EQ2000600-02	LCS		6850/ClO4 DOD			Liquid	10mL	
6	EQ2000600-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 213952 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001101-001 100.00µL E2001102-001 100.00µL E2001103-001 100.00µL EQ2000600-01 100.00µL EQ2000600-02 100.00µL EQ2000600-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000600-02 1.00µL EQ2000600-03 1.00µL

Preparation Steps

Step: Preparation
Started: 11/18/20 13:54
Finished: 11/18/20 15:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 11/18/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001103
Project:	HS20110510	**Date Collected:**	11/10/20 1400
Sample Matrix:	Water	**Date Received:**	11/11/20
Sample Name:	LH18/24-SP650_111020_AIX	**Units:**	µg/L
Lab Code:	E2001103-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**7.40**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 11:34	370006	704787	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001103
Project:	HS20110510	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000600-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/18/20	11/24/20 10:11	370006	704787	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110510
Sample Matrix: Water

Service Request: E2001103
Date Analyzed: 11/24/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 370006

	Lab Control Sample EQ2000600-02			Duplicate Lab Control Sample EQ2000600-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.103	0.100	103	84 - 119	8	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001103
Project:	HS20110510	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000600-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 10:19	370006	704787	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001103
Project:	HS20110510	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000600-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.103**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 11:18	370006	704787	

ALS Environmental
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November 25, 2020

Analytical Report for Service Request No: K2010529

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20110510

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 13, 2020
For your reference, these analyses have been assigned our service request number **K2010529.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20110510
Sample Matrix: Water

Service Request: K2010529
Date Received: 11/13/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 11/13/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 11/25/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
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K2010529

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15136**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110510
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110510-01**	**LH18/24-SP650_111020**	**Water**	**10 Nov 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			25 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 11/12/2020 1800.

Received By: _____ Date/Time: 11/13/20 1030

Cooler ID(s): _____ Temperature(s): _____

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PM KL

Cooler Receipt and Preservation Form

Client AES Houston Service Request K20 10529

Received: 11/13/20 Opened: 11/13/20 By: NP Unloaded: 11/13/20 By: NP

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
0.5	—	IR01	15136	—	—	1891 8882 7783	

6. Packing material: *Inserts* (Baggies) (Bubble Wrap) *Gel Packs* (Wet Ice) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010529
Project:	HS20110510	**Date Collected:**	11/10/20
Sample Matrix:	Water	**Date Received:**	11/13/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_111020	K2010529-001	**1.25**	0.50	0.20	0.07	1	11/19/20 17:48	
Method Blank	K2010529-MB	ND U	0.50	0.20	0.07	1	11/19/20 17:48	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010529
Project:	HS20110510	**Date Analyzed:**	11/19/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	704227

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010529-LCS	24.3	25.0	97	83-117

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December 07, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110936**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 18, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 07-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110936

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110936-01	LH18/24-SP650_111720	Water		17-Nov-2020 14:00	18-Nov-2020 09:50	☐
HS20110936-02	LH18/24-SP650_111720-AIX	Water		17-Nov-2020 14:00	18-Nov-2020 09:50	☐

ALS Houston, US Date: 07-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110936

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

WetChemistry by Method E365.3

Batch ID: R373408

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E350.3

Batch ID: R373291

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 07-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20110936
Sample ID: LH18/24-SP650_111720
Lab ID:HS20110936-01
Collection Date: 17-Nov-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**8.4**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	24-Nov-2020 11:20
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.75**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	18-Nov-2020 16:38
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	06-Dec-2020 13:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 07-Dec-20

Client:	Bhate Environmental Associates, Inc.	**ANALYTICAL REPORT**
Project:	Longhorn GW Treatment Plant Weekly Samples	WorkOrder:HS20110936
Sample ID:	LH18/24-SP650_111720-AIX	Lab ID:HS20110936-02
Collection Date:	17-Nov-2020 14:00	Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	25-Nov-2020 18:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 07-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110936

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R373291 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20110936-01	LH18/24-SP650_111720	17 Nov 2020 14:00			24 Nov 2020 11:20	1
Batch ID: R373408 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20110936-01	LH18/24-SP650_111720	17 Nov 2020 14:00			18 Nov 2020 16:38	10
Batch ID: R373454 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20110936-02	LH18/24-SP650_111720-AIX	17 Nov 2020 14:00			25 Nov 2020 18:11	1
Batch ID: R374009 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20110936-01	LH18/24-SP650_111720	17 Nov 2020 14:00			06 Dec 2020 13:24	1

ALS Houston, US Date: 07-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110936

QC BATCH REPORT

Batch ID: R373291 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-373291** Units: **mg/L** Analysis Date: **24-Nov-2020 11:20**
Client ID: Run ID: **WetChem_HS_373291** SeqNo: **5848666** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-373291** Units: **mg/L** Analysis Date: **24-Nov-2020 11:20**
Client ID: Run ID: **WetChem_HS_373291** SeqNo: **5848667** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	9.681	0.20	10	0	96.8	80 - 120				

MS Sample ID: **HS20110834-01MS** Units: **mg/L** Analysis Date: **24-Nov-2020 11:20**
Client ID: Run ID: **WetChem_HS_373291** SeqNo: **5848669** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.66	0.20	10	0.315	113	80 - 120				

MSD Sample ID: **HS20110834-01MSD** Units: **mg/L** Analysis Date: **24-Nov-2020 11:20**
Client ID: Run ID: **WetChem_HS_373291** SeqNo: **5848670** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.67	0.20	10	0.315	114	80 - 120	11.66	0.0857	20	

The following samples were analyzed in this batch: HS20110936-01

ALS Houston, US Date: 07-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110936

QC BATCH REPORT

Batch ID: R373408 (0) **Instrument: UV-2450** **Method: ORTHO PHOSPHATE (PO4) AS P BY E365.3**

MBLK Sample ID: **MBLK-R373408** Units: **mg/L** Analysis Date: **18-Nov-2020 16:38**
Client ID: Run ID: **UV-2450_373408** SeqNo: **5851463** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-R373408** Units: **mg/L** Analysis Date: **18-Nov-2020 16:38**
Client ID: Run ID: **UV-2450_373408** SeqNo: **5851462** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.249	0.0250	0.25	0	99.6	85 - 115				

MS Sample ID: **HS20110900-01MS** Units: **mg/L** Analysis Date: **18-Nov-2020 16:38**
Client ID: Run ID: **UV-2450_373408** SeqNo: **5851482** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.303	0.0250	0.25	0.056	98.8	80 - 120				

MSD Sample ID: **HS20110900-01MSD** Units: **mg/L** Analysis Date: **18-Nov-2020 16:38**
Client ID: Run ID: **UV-2450_373408** SeqNo: **5851481** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.298	0.0250	0.25	0.056	96.8	80 - 120	0.303	1.66	20	

The following samples were analyzed in this batch: HS20110936-01

ALS Houston, US Date: 07-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20110936**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 07-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110936

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110936-01	LH18/24-SP650_111720	Login	11/18/2020 3:59:11 PM	NDR	WET271
HS20110936-01	LH18/24-SP650_111720	Login	11/18/2020 3:59:11 PM	NDR	WET271
HS20110936-01	LH18/24-SP650_111720	Login	11/18/2020 3:59:11 PM	NDR	Sub
HS20110936-02	LH18/24-SP650_111720-AIX	Login	11/18/2020 3:59:11 PM	NDR	Sub

ALS Houston, US Date: 07-Dec-20

Sample Receipt Checklist

Work Order ID: HS20110936 **Date/Time Received:** 18-Nov-2020 09:50

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By: /S/ Nilesh D. Ranchod (eSignature) 18-Nov-2020 16:01 (Date/Time) **Reviewed by:** /S/ RJ Modashia (eSignature) 18-Nov-2020 22:11 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.0C U/C	IR25	
Cooler(s)/Kit(s):	46544		
Date/Time sample(s) sent to storage:	11/18/2020 16:15		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Page 1 of 1

Project: BHATE LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. NWO1312.0150.0 16.0001
Job: **GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES**	
Prepared By: Scott Beesinger	P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_111720	Water	11/17/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_111720	Water	11/17/20 / 14:00		1			X		NONE	
LH18/24-SP650_111720_AIX	Water	11/17/20 / 14:00		1				X	NONE	

HS20110936
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/17/20	14:30	JM PM	11-18-20	09:50						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

46544 2.0C IR 25 CFO

(Word) S:\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46544

CUSTODY SEAL

Date: 11/17/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 11/18/20

46544 NOV 18 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46544

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 14OCT20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: ADDITINAOL BOTTLES - BO 74354 - RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1891 8881 5220

WED - 18 NOV 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

November 25, 2020 Service Request No:E2001135

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20110936

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 18, 2020
For your reference, these analyses have been assigned our service request number **E2001135.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001135
Project:	HS20110936	**Date Received:**	11/18/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/18/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000615: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits. The MS and MSD was performed on an unrelated sample.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001135
Project: HS20110936

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001135-001	LH18/24-SP650_111720_AIX	11/17/2020	1400

Service Request Summary

Folder #: **E2001135**
Client Name: ALS Environmental - US
Project Name: HS20110936
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/18/20
Internal Due Date: 12/4/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110936
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 3C
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001135-001	LH18/24-SP650_111720_AIX	Water	11/17/20 1400	**IV**

Service Request Summary

Folder #: **E2001135**
Client Name: ALS Environmental - US
Project Name: HS20110936
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/18/20
Internal Due Date: 12/4/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110936
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 3C
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 12/4,level IV due 12/11

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15194**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110936
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110936-02**	**LH18/24-SP650_111720-AIX**	**Water**	**17 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			04 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time:

Received By: Date/Time: 11/18/20 1614

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1231

Date/Time Received: 11/18/20 Initials: CH

Date/Time Logged in: 11/18/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		11/18/20	1614	CH	2.8	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 370354 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/24/20 09:49

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001135-001	LH18/24-SP650_111720_AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001142-001	LHAAP17_1111920_H	.01	6850/ClO4 DOD			Water	10mL	
3	E2001142-002	LHAAP17_1111920_J	.01	6850/ClO4 DOD			Water	10mL	
4	E2001143-001	LHAAP17_1111920_N	.01	6850/ClO4 DOD			Water	10mL	
5	E2001143-002	LHAAP17_1111920_M	.01	6850/ClO4 DOD			Water	10mL	
6	E2001143-003	LHAAP17_1111920_L	.01	6850/ClO4 DOD			Water	10mL	
7	E2001143-004	LHAAP17_1111920_K	.01	6850/ClO4 DOD			Water	10mL	
8	E2001150-001	43 MW03	.01	6850/ClO4 DOD			Water	10mL	
9	E2001150-002	43 MW03 DUP 102720	.01	6850/ClO4 DOD			Water	10mL	
10	E2001150-003	43 MW04	.01	6850/ClO4 DOD			Water	10mL	
11	E2001150-004	43 MW05	.01	6850/ClO4 DOD			Water	10mL	
12	E2001150-005	43 MW06	.01	6850/ClO4 DOD			Water	10mL	
13	E2001150-006	43 MW01	.01	6850/ClO4 DOD			Water	10mL	
14	E2001150-007	EB102720	.01	6850/ClO4 DOD			Water	10mL	
15	EQ2000615-01	MB		6850/ClO4 DOD			Liquid	10mL	
16	EQ2000615-02	LCS		6850/ClO4 DOD			Liquid	10mL	
17	EQ2000615-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
18	EQ2000615-04	43 MW01 MS	.01	6850/ClO4 DOD			Liquid	10mL	
19	EQ2000615-05	43 MW01 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 213952 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001135-001	100.00µL	E2001142-002	100.00µL	E2001143-001	100.00µL	E2001143-002	100.00µL	E2001143-003	100.00µL	E2001143-004	100.00µL
E2001150-001	100.00µL	E2001150-002	100.00µL	E2001150-003	100.00µL	E2001150-004	100.00µL	E2001150-005	100.00µL	E2001150-006	100.00µL
E2001150-007	100.00µL	EQ2000615-01	100.00µL	EQ2000615-02	100.00µL	EQ2000615-03	100.00µL	EQ2000615-04	100.00µL	EQ2000615-05	100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000615-02	1.00µL	EQ2000615-03	1.00µL	EQ2000615-04	1.00µL	EQ2000615-05	1.00µL

Preparation Information Benchsheet

Prep Run#: 370354 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/24/20 09:49

Preparation Steps

Step: Preparation
Started: 11/24/20 09:49
Finished: 11/24/20 10:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 11/24/2020

Chain of Custody

Relinquished By:		Date:	
Received By:		Date:	

Extracts Examined
Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001135
Project:	HS20110936	**Date Collected:**	11/17/20 1400
Sample Matrix:	Water	**Date Received:**	11/18/20
Sample Name:	LH18/24-SP650_111720_AIX	**Units:**	µg/L
Lab Code:	E2001135-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**6.90**		0.100	0.0500	0.0250	1	11/24/20	11/24/20 13:42	370354	704948	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001135
Project:	HS20110936	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000615-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/24/20	11/24/20 14:45	370354	704948	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110936
Sample Matrix: Water

Service Request: E2001135
Date Analyzed: 11/24/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 370354

	Lab Control Sample EQ2000615-02			Duplicate Lab Control Sample EQ2000615-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.115	0.100	115	0.112	0.100	112	84 - 119	3	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001135
Project:	HS20110936	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000615-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.115**		0.100	0.0500	0.0250	1	11/24/20	11/24/20 14:53	370354	704948	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001135
Project:	HS20110936	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000615-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	11/24/20	11/24/20 15:12	370354	704948	

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December 04, 2020 **Analytical Report for Service Request No:** K2010851

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: ALS Houston DOD TOC

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 20, 2020
For your reference, these analyses have been assigned our service request number **K2010851.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2010851
Date Received: 11/20/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 11/20/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 12/04/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
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LZ010851

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Houston, TX 77099
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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15195**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110936
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110936-01**	**LH18/24-SP650_111720**	**Water**	**17 Nov 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			04 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 11/19/2020 1800

Received By: _____ Date/Time: 11/20/20 1030

Cooler ID(s): _____ Temperature(s): _____

PM KL

Cooler Receipt and Preservation Form

Client AIS Houston Service Request K20 10851

Received: 11/20/20 Opened: 11/20/20 By: NP Unloaded: 11/20/20 By: NP

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*____ *NA*
3. Were custody seals on coolers? NA (N) N If yes, how many and where? 2 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
0.3	—	IR02	15195	—	—	1891 8582 9330	

6. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* ____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: ____

General Chemistry

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010851
Project:	ALS Houston DOD TOC	**Date Collected:**	11/17/20
Sample Matrix:	Water	**Date Received:**	11/20/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_111720	K2010851-001	**1.87**	0.50	0.20	0.07	1	11/24/20 20:55	
Method Blank	K2010851-MB	ND U	0.50	0.20	0.07	1	11/24/20 20:55	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010851
Project:	ALS Houston DOD TOC	**Date Analyzed:**	11/24/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	704909

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010851-LCS	23.6	25.0	95	83-117

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November 30, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110952**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 18, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110952

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110952-01	LH18/24-SP650_111720	Water		17-Nov-2020 14:00	18-Nov-2020 09:50	☐
HS20110952-02	Trip Blank	Water		17-Nov-2020 00:00	18-Nov-2020 09:50	☐

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110952

GCMS Volatiles by Method SW8260

Batch ID: R373481

Sample ID: CCV

- Naphthalene and 1,2,3-Trichlorobenzene exceeded %D limits for CCV. Samples are ND for these compounds.

Sample ID: HS20110813-06MSD

- MSD is for an unrelated sample

WetChemistry by Method SW9056

Batch ID: R373546

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110952
Sample ID: LH18/24-SP650_111720 Lab ID:HS20110952-01
Collection Date: 17-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:26
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	26-Nov-2020 06:26
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	26-Nov-2020 06:26
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:26
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	26-Nov-2020 06:26
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	26-Nov-2020 06:26
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:26
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:26
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:26
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	26-Nov-2020 06:26
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:26
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110952
Sample ID: LH18/24-SP650_111720 Lab ID:HS20110952-01
Collection Date: 17-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
cis-1,2-Dichloroethene	**8.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	26-Nov-2020 06:26
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	26-Nov-2020 06:26
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	26-Nov-2020 06:26
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	26-Nov-2020 06:26
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:26
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Trichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**UG/L**	1	26-Nov-2020 06:26
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:26
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:26
Surr: 1,2-Dichloroethane-d4	*86.6*			**0**	*81-118*	*%REC*	*1*	*26-Nov-2020 06:26*
Surr: 4-Bromofluorobenzene	*88.5*			**0**	*85-114*	*%REC*	*1*	*26-Nov-2020 06:26*
Surr: Dibromofluoromethane	*90.7*			**0**	*80-119*	*%REC*	*1*	*26-Nov-2020 06:26*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*26-Nov-2020 06:26*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**628**		**4.00**	**10.0**	**10.0**	**mg/L**	20	26-Nov-2020 03:11
Sulfate	**31.4**		**0.200**	**0.500**	**0.500**	**mg/L**	1	26-Nov-2020 02:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110952

Sample ID: Trip Blank Lab ID:HS20110952-02

Collection Date: 17-Nov-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:05
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	26-Nov-2020 06:05
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	26-Nov-2020 06:05
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:05
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	26-Nov-2020 06:05
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	26-Nov-2020 06:05
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	26-Nov-2020 06:05
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110952

Sample ID: Trip Blank Lab ID:HS20110952-02

Collection Date: 17-Nov-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	26-Nov-2020 06:05
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	26-Nov-2020 06:05
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	26-Nov-2020 06:05
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	26-Nov-2020 06:05
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	26-Nov-2020 06:05
Surr: 1,2-Dichloroethane-d4	*85.0*			**0**	*81-118*	*%REC*	*1*	*26-Nov-2020 06:05*
Surr: 4-Bromofluorobenzene	*85.8*			**0**	*85-114*	*%REC*	*1*	*26-Nov-2020 06:05*
Surr: Dibromofluoromethane	*90.0*			**0**	*80-119*	*%REC*	*1*	*26-Nov-2020 06:05*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*26-Nov-2020 06:05*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R373481 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20110952-01	LH18/24-SP650_111720	17 Nov 2020 14:00			26 Nov 2020 06:26	1
HS20110952-02	Trip Blank	17 Nov 2020 00:00			26 Nov 2020 06:05	1
Batch ID: R373546 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20110952-01	LH18/24-SP650_111720	17 Nov 2020 14:00			26 Nov 2020 03:11	20
HS20110952-01	LH18/24-SP650_111720	17 Nov 2020 14:00			26 Nov 2020 02:53	1

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373481 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201125** Units: **UG/L** Analysis Date: **25-Nov-2020 23:04**
Client ID: Run ID: **VOA6_373481** SeqNo: **5853078** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373481 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201125** Units: **UG/L** Analysis Date: **25-Nov-2020 23:04**
Client ID: Run ID: **VOA6_373481** SeqNo: **5853078** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*42.78*	*1.0*	*50*	*0*	*85.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*43.21*	*1.0*	*50*	*0*	*86.4*	*85 - 114*				
Surr: Dibromofluoromethane	*44.79*	*1.0*	*50*	*0*	*89.6*	*80 - 119*				
Surr: Toluene-d8	*50.26*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373481 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201125** Units: **UG/L** Analysis Date: **25-Nov-2020 22:01**
Client ID: Run ID: **VOA6_373481** SeqNo: **5853077** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.45	1.0	20	0	97.3	78 - 124				
1,1,1-Trichloroethane	22.36	1.0	20	0	112	74 - 131				
1,1,2,2-Tetrachloroethane	21.2	1.0	20	0	106	71 - 121				
1,1,2-Trichloroethane	20.33	1.0	20	0	102	80 - 119				
1,1-Dichloroethane	22.22	1.0	20	0	111	77 - 125				
1,1-Dichloroethene	21.82	1.0	20	0	109	71 - 131				
1,1-Dichloropropene	20.61	1.0	20	0	103	78 - 125				
1,2,3-Trichlorobenzene	23.76	1.0	20	0	119	69 - 129				
1,2,3-Trichloropropane	21.38	1.0	20	0	107	73 - 122				
1,2,4-Trichlorobenzene	22.36	1.0	20	0	112	69 - 130				
1,2,4-Trimethylbenzene	18.43	1.0	20	0	92.1	76 - 124				
1,2-Dibromo-3-chloropropane	20.95	1.0	20	0	105	62 - 128				
1,2-Dibromoethane	21.27	1.0	20	0	106	77 - 121				
1,2-Dichlorobenzene	19.82	1.0	20	0	99.1	80 - 119				
1,2-Dichloroethane	23.34	1.0	20	0	117	73 - 128				
1,2-Dichloropropane	21.31	1.0	20	0	107	78 - 122				
1,3,5-Trimethylbenzene	18.21	1.0	20	0	91.0	75 - 124				
1,3-Dichlorobenzene	19.72	1.0	20	0	98.6	80 - 119				
1,3-Dichloropropane	21.39	1.0	20	0	107	80 - 119				
1,4-Dichlorobenzene	20.44	1.0	20	0	102	79 - 118				
2,2-Dichloropropane	19.52	1.0	20	0	97.6	60 - 139				
2-Butanone	45.83	2.0	40	0	115	56 - 143				
2-Chlorotoluene	18.12	1.0	20	0	90.6	79 - 122				
2-Hexanone	39.85	2.0	40	0	99.6	57 - 139				
4-Chlorotoluene	18.69	1.0	20	0	93.5	78 - 122				
4-Isopropyltoluene	19.23	1.0	20	0	96.1	77 - 127				
4-Methyl-2-pentanone	39.59	2.0	40	0	99.0	67 - 130				
Acetone	51.97	2.0	40	0	130	39 - 160				
Benzene	22.38	1.0	20	0	112	79 - 120				
Bromobenzene	20.51	1.0	20	0	103	80 - 120				
Bromochloromethane	23.44	1.0	20	0	117	78 - 123				
Bromodichloromethane	21.97	1.0	20	0	110	79 - 125				
Bromoform	19.66	1.0	20	0	98.3	66 - 130				
Bromomethane	22.88	1.0	20	0	114	53 - 141				

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373481 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201125** Units: **UG/L** Analysis Date: **25-Nov-2020 22:01**
Client ID: Run ID: **VOA6_373481** SeqNo: **5853077** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.43	2.0	40	0	104	64 - 133				
Carbon tetrachloride	20.36	1.0	20	0	102	72 - 136				
Chlorobenzene	19.49	1.0	20	0	97.4	82 - 118				
Chloroethane	20.58	1.0	20	0	103	60 - 138				
Chloroform	21.27	1.0	20	0	106	79 - 124				
Chloromethane	21.43	1.0	20	0	107	50 - 139				
cis-1,2-Dichloroethene	21.19	1.0	20	0	106	78 - 123				
cis-1,3-Dichloropropene	21.55	1.0	20	0	108	75 - 124				
Dibromochloromethane	21.38	1.0	20	0	107	74 - 126				
Dibromomethane	22.76	1.0	20	0	114	79 - 123				
Dichlorodifluoromethane	21.08	1.0	20	0	105	32 - 152				
Ethylbenzene	19.4	1.0	20	0	97.0	79 - 121				
Hexachlorobutadiene	19.87	1.0	20	0	99.3	66 - 134				
Isopropylbenzene	18.32	1.0	20	0	91.6	72 - 131				
m,p-Xylene	38.69	2.0	40	0	96.7	80 - 121				
Methylene chloride	21.8	2.0	20	0	109	74 - 124				
Naphthalene	23.68	1.0	20	0	118	61 - 128				
n-Butylbenzene	18.55	1.0	20	0	92.8	75 - 128				
n-Propylbenzene	18.46	1.0	20	0	92.3	76 - 126				
o-Xylene	19.66	1.0	20	0	98.3	78 - 122				
sec-Butylbenzene	18.16	1.0	20	0	90.8	77 - 126				
Styrene	19.79	1.0	20	0	98.9	78 - 123				
tert-Butylbenzene	18.63	1.0	20	0	93.1	78 - 124				
Tetrachloroethene	20.05	1.0	20	0	100	74 - 129				
Toluene	20.09	1.0	20	0	100	80 - 121				
trans-1,2-Dichloroethene	22.38	1.0	20	0	112	75 - 124				
trans-1,3-Dichloropropene	21.55	1.0	20	0	108	73 - 127				
Trichloroethene	22.98	1.0	20	0	115	79 - 123				
Trichlorofluoromethane	20.82	1.0	20	0	104	65 - 141				
Vinyl chloride	21.01	1.0	20	0	105	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.52*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.81*	*1.0*	*50*	*0*	*93.6*	*85 - 114*				
Surr: Dibromofluoromethane	*50.8*	*1.0*	*50*	*0*	*102*	*80 - 119*				
Surr: Toluene-d8	*48.3*	*1.0*	*50*	*0*	*96.6*	*89 - 112*				

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373481 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20110813-06MS** Units: **UG/L** Analysis Date: **26-Nov-2020 00:28**
Client ID: Run ID: **VOA6_373481** SeqNo: **5853082** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	17.24	1.0	20	0	86.2	78 - 124				
1,1,1-Trichloroethane	17.59	1.0	20	0	88.0	74 - 131				
1,1,2,2-Tetrachloroethane	18.1	1.0	20	0	90.5	71 - 121				
1,1,2-Trichloroethane	17.18	1.0	20	0	85.9	80 - 119				
1,1-Dichloroethane	17.06	1.0	20	0	85.3	77 - 125				
1,1-Dichloroethene	16.99	1.0	20	0	84.9	71 - 131				
1,1-Dichloropropene	17.31	1.0	20	0	86.5	78 - 125				
1,2,3-Trichlorobenzene	22.7	1.0	20	0	114	69 - 129				
1,2,3-Trichloropropane	18.41	1.0	20	0	92.1	73 - 122				
1,2,4-Trichlorobenzene	19.24	1.0	20	0	96.2	69 - 130				
1,2,4-Trimethylbenzene	18.88	1.0	20	0	94.4	76 - 124				
1,2-Dibromo-3-chloropropane	21.86	1.0	20	0	109	62 - 128				
1,2-Dibromoethane	17.04	1.0	20	0	85.2	77 - 121				
1,2-Dichlorobenzene	18.73	1.0	20	0	93.6	80 - 119				
1,2-Dichloroethane	17.77	1.0	20	0	88.8	73 - 128				
1,2-Dichloropropane	17.03	1.0	20	0	85.1	78 - 122				
1,3,5-Trimethylbenzene	18.67	1.0	20	0	93.3	75 - 124				
1,3-Dichlorobenzene	18.43	1.0	20	0	92.1	80 - 119				
1,3-Dichloropropane	17.89	1.0	20	0	89.5	80 - 119				
1,4-Dichlorobenzene	19.2	1.0	20	0	96.0	79 - 118				
2,2-Dichloropropane	15.26	1.0	20	0	76.3	60 - 139				
2-Butanone	29.8	2.0	40	0	74.5	56 - 143				
2-Chlorotoluene	17.42	1.0	20	0	87.1	79 - 122				
2-Hexanone	34.28	2.0	40	0	85.7	57 - 139				
4-Chlorotoluene	18.04	1.0	20	0	90.2	78 - 122				
4-Isopropyltoluene	19.49	1.0	20	0	97.5	77 - 127				
4-Methyl-2-pentanone	34.75	2.0	40	0	86.9	67 - 130				
Acetone	32.85	2.0	40	2.144	76.8	39 - 160				
Benzene	18.22	1.0	20	0	91.1	79 - 120				
Bromobenzene	18.95	1.0	20	0	94.7	80 - 120				
Bromochloromethane	16.46	1.0	20	0	82.3	78 - 123				
Bromodichloromethane	17.42	1.0	20	0	87.1	79 - 125				
Bromoform	17.51	1.0	20	0	87.5	66 - 130				
Bromomethane	18.76	1.0	20	0	93.8	53 - 141				

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373481 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110813-06MS** Units: **UG/L** Analysis Date: **26-Nov-2020 00:28**
Client ID: Run ID: **VOA6_373481** SeqNo: **5853082** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	28.93	2.0	40	0	72.3	64 - 133				
Carbon tetrachloride	18.81	1.0	20	0	94.0	72 - 136				
Chlorobenzene	17.12	1.0	20	0	85.6	82 - 118				
Chloroethane	15.52	1.0	20	0	77.6	60 - 138				
Chloroform	16.38	1.0	20	0	81.9	79 - 124				
Chloromethane	13.75	1.0	20	0	68.7	50 - 139				
cis-1,2-Dichloroethene	41.19	1.0	20	24.77	82.1	78 - 123				
cis-1,3-Dichloropropene	16.49	1.0	20	0	82.5	75 - 124				
Dibromochloromethane	17.85	1.0	20	0	89.3	74 - 126				
Dibromomethane	18.05	1.0	20	0	90.3	79 - 123				
Dichlorodifluoromethane	12.46	1.0	20	0	62.3	32 - 152				
Ethylbenzene	17.91	1.0	20	0	89.5	79 - 121				
Hexachlorobutadiene	16.42	1.0	20	0	82.1	66 - 134				
Isopropylbenzene	18.09	1.0	20	0	90.5	72 - 131				
m,p-Xylene	36.23	2.0	40	0	90.6	80 - 121				
Methylene chloride	15.8	2.0	20	0	79.0	74 - 124				
Naphthalene	21.14	1.0	20	0	106	61 - 128				
n-Butylbenzene	19.26	1.0	20	0	96.3	75 - 128				
n-Propylbenzene	18.87	1.0	20	0	94.4	76 - 126				
o-Xylene	18.15	1.0	20	0	90.7	78 - 122				
sec-Butylbenzene	19.61	1.0	20	0	98.0	77 - 126				
Styrene	17.51	1.0	20	0	87.6	78 - 123				
tert-Butylbenzene	18.93	1.0	20	0	94.6	78 - 124				
Tetrachloroethene	19.89	1.0	20	1.116	93.9	74 - 129				
Toluene	18.57	1.0	20	0	92.9	80 - 121				
trans-1,2-Dichloroethene	16.15	1.0	20	0	80.7	75 - 124				
trans-1,3-Dichloropropene	16.08	1.0	20	0	80.4	73 - 127				
Trichloroethene	30.58	1.0	20	11.59	95.0	79 - 123				
Trichlorofluoromethane	17.16	1.0	20	0	85.8	65 - 141				
Vinyl chloride	13.88	1.0	20	0	69.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.18*	*1.0*	*50*	*0*	*90.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.22*	*1.0*	*50*	*0*	*92.4*	*85 - 114*				
Surr: Dibromofluoromethane	*46.18*	*1.0*	*50*	*0*	*92.4*	*80 - 119*				
Surr: Toluene-d8	*49.79*	*1.0*	*50*	*0*	*99.6*	*89 - 112*				

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373481 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20110813-06MSD** Units: **UG/L** Analysis Date: **26-Nov-2020 00:49**
Client ID: Run ID: **VOA6_373481** SeqNo: **5853083** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	16.77	1.0	20	0	83.9	78 - 124	17.24	2.75	20	
1,1,1-Trichloroethane	16.8	1.0	20	0	84.0	74 - 131	17.59	4.59	20	
1,1,2,2-Tetrachloroethane	19.19	1.0	20	0	96.0	71 - 121	18.1	5.86	20	
1,1,2-Trichloroethane	16.06	1.0	20	0	80.3	80 - 119	17.18	6.73	20	
1,1-Dichloroethane	16.01	1.0	20	0	80.0	77 - 125	17.06	6.32	20	
1,1-Dichloroethene	15.54	1.0	20	0	77.7	71 - 131	16.99	8.88	20	
1,1-Dichloropropene	16.96	1.0	20	0	84.8	78 - 125	17.31	2	20	
1,2,3-Trichlorobenzene	24.29	1.0	20	0	121	69 - 129	22.7	6.76	20	
1,2,3-Trichloropropane	17.7	1.0	20	0	88.5	73 - 122	18.41	3.95	20	
1,2,4-Trichlorobenzene	21.72	1.0	20	0	109	69 - 130	19.24	12.1	20	
1,2,4-Trimethylbenzene	19.15	1.0	20	0	95.8	76 - 124	18.88	1.41	20	
1,2-Dibromo-3-chloropropane	19.8	1.0	20	0	99.0	62 - 128	21.86	9.92	20	
1,2-Dibromoethane	16.09	1.0	20	0	80.4	77 - 121	17.04	5.74	20	
1,2-Dichlorobenzene	19.36	1.0	20	0	96.8	80 - 119	18.73	3.35	20	
1,2-Dichloroethane	17.43	1.0	20	0	87.2	73 - 128	17.77	1.91	20	
1,2-Dichloropropane	16.58	1.0	20	0	82.9	78 - 122	17.03	2.64	20	
1,3,5-Trimethylbenzene	17.8	1.0	20	0	89.0	75 - 124	18.67	4.76	20	
1,3-Dichlorobenzene	18.54	1.0	20	0	92.7	80 - 119	18.43	0.597	20	
1,3-Dichloropropane	16.85	1.0	20	0	84.2	80 - 119	17.89	6.01	20	
1,4-Dichlorobenzene	18.86	1.0	20	0	94.3	79 - 118	19.2	1.81	20	
2,2-Dichloropropane	14.18	1.0	20	0	70.9	60 - 139	15.26	7.35	20	
2-Butanone	31.17	2.0	40	0	77.9	56 - 143	29.8	4.49	20	
2-Chlorotoluene	16.85	1.0	20	0	84.2	79 - 122	17.42	3.34	20	
2-Hexanone	33.34	2.0	40	0	83.4	57 - 139	34.28	2.77	20	
4-Chlorotoluene	17.79	1.0	20	0	88.9	78 - 122	18.04	1.39	20	
4-Isopropyltoluene	19.41	1.0	20	0	97.1	77 - 127	19.49	0.421	20	
4-Methyl-2-pentanone	32.97	2.0	40	0	82.4	67 - 130	34.75	5.24	20	
Acetone	31.37	2.0	40	2.144	73.1	39 - 160	32.85	4.61	20	
Benzene	17.8	1.0	20	0	89.0	79 - 120	18.22	2.35	20	
Bromobenzene	19.4	1.0	20	0	97.0	80 - 120	18.95	2.36	20	
Bromochloromethane	15.23	1.0	20	0	76.1	78 - 123	16.46	7.77	20	S
Bromodichloromethane	17.28	1.0	20	0	86.4	79 - 125	17.42	0.791	20	
Bromoform	17.69	1.0	20	0	88.4	66 - 130	17.51	1.02	20	
Bromomethane	17.79	1.0	20	0	89.0	53 - 141	18.76	5.29	20	

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373481 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20110813-06MSD** Units: **UG/L** Analysis Date: **26-Nov-2020 00:49**
Client ID: Run ID: **VOA6_373481** SeqNo: **5853083** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	26.64	2.0	40	0	66.6	64 - 133	28.93	8.25	20	
Carbon tetrachloride	17.67	1.0	20	0	88.3	72 - 136	18.81	6.23	20	
Chlorobenzene	16.27	1.0	20	0	81.3	82 - 118	17.12	5.09	20	S
Chloroethane	14.08	1.0	20	0	70.4	60 - 138	15.52	9.71	20	
Chloroform	15.82	1.0	20	0	79.1	79 - 124	16.38	3.5	20	
Chloromethane	12.9	1.0	20	0	64.5	50 - 139	13.75	6.36	20	
cis-1,2-Dichloroethene	38.28	1.0	20	24.77	67.5	78 - 123	41.19	7.32	20	S
cis-1,3-Dichloropropene	15.91	1.0	20	0	79.5	75 - 124	16.49	3.59	20	
Dibromochloromethane	16.59	1.0	20	0	82.9	74 - 126	17.85	7.35	20	
Dibromomethane	17.59	1.0	20	0	87.9	79 - 123	18.05	2.61	20	
Dichlorodifluoromethane	11.87	1.0	20	0	59.4	32 - 152	12.46	4.8	20	
Ethylbenzene	17.09	1.0	20	0	85.5	79 - 121	17.91	4.66	20	
Hexachlorobutadiene	16.87	1.0	20	0	84.4	66 - 134	16.42	2.75	20	
Isopropylbenzene	17.09	1.0	20	0	85.4	72 - 131	18.09	5.71	20	
m,p-Xylene	34.25	2.0	40	0	85.6	80 - 121	36.23	5.63	20	
Methylene chloride	14.58	2.0	20	0	72.9	74 - 124	15.8	8	20	S
Naphthalene	23.14	1.0	20	0	116	61 - 128	21.14	9.02	20	
n-Butylbenzene	18.92	1.0	20	0	94.6	75 - 128	19.26	1.75	20	
n-Propylbenzene	18.12	1.0	20	0	90.6	76 - 126	18.87	4.07	20	
o-Xylene	17.27	1.0	20	0	86.3	78 - 122	18.15	4.97	20	
sec-Butylbenzene	19.42	1.0	20	0	97.1	77 - 126	19.61	0.94	20	
Styrene	16.49	1.0	20	0	82.5	78 - 123	17.51	6.02	20	
tert-Butylbenzene	18.94	1.0	20	0	94.7	78 - 124	18.93	0.0579	20	
Tetrachloroethene	18.59	1.0	20	1.116	87.4	74 - 129	19.89	6.74	20	
Toluene	16.97	1.0	20	0	84.9	80 - 121	18.57	9.01	20	
trans-1,2-Dichloroethene	15.33	1.0	20	0	76.6	75 - 124	16.15	5.21	20	
trans-1,3-Dichloropropene	17.03	1.0	20	0	85.1	73 - 127	16.08	5.72	20	
Trichloroethene	28.18	1.0	20	11.59	83.0	79 - 123	30.58	8.17	20	
Trichlorofluoromethane	16.01	1.0	20	0	80.0	65 - 141	17.16	6.95	20	
Vinyl chloride	13.3	1.0	20	0	66.5	58 - 137	13.88	4.31	20	
Surr: 1,2-Dichloroethane-d4	*44.15*	*1.0*	*50*	*0*	*88.3*	*81 - 118*	*45.18*	*2.3*	*20*	
Surr: 4-Bromofluorobenzene	*45.49*	*1.0*	*50*	*0*	*91.0*	*85 - 114*	*46.22*	*1.58*	*20*	
Surr: Dibromofluoromethane	*45.42*	*1.0*	*50*	*0*	*90.8*	*80 - 119*	*46.18*	*1.65*	*20*	
Surr: Toluene-d8	*50.63*	*1.0*	*50*	*0*	*101*	*89 - 112*	*49.79*	*1.67*	*20*	

ALS Houston, US Date: 30-Nov-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20110952

QC BATCH REPORT

Batch ID:	**R373481 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch:	HS20110952-01	HS20110952-02

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373546 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-112420** Units: **mg/L** Analysis Date: **25-Nov-2020 14:20**
Client ID: Run ID: **ICS-Integrion_373546** SeqNo: **5855100** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.2141	0.500								J

LCS Sample ID: **LCS-112420** Units: **mg/L** Analysis Date: **25-Nov-2020 14:38**
Client ID: Run ID: **ICS-Integrion_373546** SeqNo: **5855101** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.87	0.500	20	0	99.3	80 - 120				
Sulfate	19.84	0.500	20	0	99.2	80 - 120				

MS Sample ID: **HS20110979-08MS** Units: **mg/L** Analysis Date: **25-Nov-2020 22:39**
Client ID: Run ID: **ICS-Integrion_373546** SeqNo: **5855112** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	75.27	0.500	10	64.93	103	80 - 120				O
Sulfate	34.14	0.500	10	23.66	105	80 - 120				

MS Sample ID: **HS20110979-02MS** Units: **mg/L** Analysis Date: **26-Nov-2020 04:59**
Client ID: Run ID: **ICS-Integrion_373546** SeqNo: **5855133** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	67.85	0.500	10	57.88	99.7	80 - 120				O
Sulfate	78.56	0.500	10	67.84	107	80 - 120				O

MSD Sample ID: **HS20110979-08MSD** Units: **mg/L** Analysis Date: **25-Nov-2020 22:57**
Client ID: Run ID: **ICS-Integrion_373546** SeqNo: **5855113** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	74.06	0.500	10	64.93	91.3	80 - 120	75.27	1.62	20	O
Sulfate	33.52	0.500	10	23.66	98.6	80 - 120	34.14	1.84	20	

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110952

QC BATCH REPORT

Batch ID: R373546 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MSD Sample ID: **HS20110979-02MSD** Units: **mg/L** Analysis Date: **26-Nov-2020 05:18**
Client ID: Run ID: **ICS-Integrion_373546** SeqNo: **5855134** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	66.82	0.500	10	57.88	89.4	80 - 120	67.85	1.53	20	O
Sulfate	76.65	0.500	10	67.84	88.1	80 - 120	78.56	2.45	20	O

The following samples were analyzed in this batch: HS20110952-01

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20110952**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

ALS Houston, US Date: 30-Nov-20

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 30-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110952

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110952-01	LH18/24-SP650_111720	Login	11/18/2020 5:34:08 PM	NDR	WET400
HS20110952-01	LH18/24-SP650_111720	Login	11/18/2020 5:34:08 PM	NDR	VOA048
HS20110952-02	Trip Blank	Login	11/18/2020 5:34:08 PM	NDR	VOA048

ALS Houston, US Date: 30-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110952 **Date/Time Received:** **18-Nov-2020 09:50**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	*/S/ Jared R. Makan*	18-Nov-2020 17:36	**Reviewed by:**	*/S/ RJ Modashia*	18-Nov-2020 22:29
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑	
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑	
Chain of custody present?	Yes ☑	No ☐	1 Page(s)	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None	
Samplers name present on COC?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
Temperature(s)/Thermometer(s):	2.0C U/c		IR31	
Cooler(s)/Kit(s):	46544			
Date/Time sample(s) sent to storage:	11/18/2020 18:00			
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
pH adjusted?	Yes ☐	No ☐	N/A ☑	
pH adjusted by:				

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT
BI-WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_111720	Water	11/17/20 / 14:00		3	3		HCL	
LH18/24-SP650_111720	Water	11/17/20 / 14:00		1		1	NONE	
Trip Blank	Water	11/17/20		2	2		HCL	

HS20110952
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Additional Remarks: **Standard TAT on other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/17/20	14:30	JM PM	11-18-20	9:50						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks

46544 2.0C IR25 CFO

(Word) S:\Files\Forms\Chain of Custody - BiWeekly

01019019

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46544

CUSTODY SEAL

Date: 11/17/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 11/18/20

46544 NOV 18 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46544

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1209-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 14OCT20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: ADDITINAOL BOTTLES - BO 74354 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8881 5220

WED - 18 NOV 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

December 15, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20111255**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 25, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20111255

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20111255-01	LH18/24-SP650_112420	Water		24-Nov-2020 14:00	25-Nov-2020 10:45	☐
HS20111255-02	LH18/24-SP650_112420-AIX	Water		24-Nov-2020 14:00	25-Nov-2020 10:45	☐

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20111255

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

WetChemistry by Method E350.3

Batch ID: R373798

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R373407

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20111255
Sample ID: LH18/24-SP650_112420
Lab ID:HS20111255-01
Collection Date: 24-Nov-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**4.8**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	02-Dec-2020 17:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.82**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	25-Nov-2020 13:00
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	15-Dec-2020 12:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client:	Bhate Environmental Associates, Inc.	**ANALYTICAL REPORT**
Project:	Longhorn GW Treatment Plant Weekly Samples	WorkOrder:HS20111255
Sample ID:	LH18/24-SP650_112420-AIX	Lab ID:HS20111255-02
Collection Date:	24-Nov-2020 14:00	Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	15-Dec-2020 18:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20111255

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R373407 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20111255-01	LH18/24-SP650_112420	24 Nov 2020 14:00			25 Nov 2020 13:00	10
Batch ID: R373798 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20111255-01	LH18/24-SP650_112420	24 Nov 2020 14:00			02 Dec 2020 17:00	1
Batch ID: R374637 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20111255-01	LH18/24-SP650_112420	24 Nov 2020 14:00			15 Dec 2020 12:22	1
Batch ID: R374695 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20111255-02	LH18/24-SP650_112420-AIX	24 Nov 2020 14:00			15 Dec 2020 18:35	1

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20111255

QC BATCH REPORT

Batch ID: R373407 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-R373407** Units: **mg/L** Analysis Date: **25-Nov-2020 13:00**
Client ID: Run ID: **UV-2450_373407** SeqNo: **5851454** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-R373407** Units: **mg/L** Analysis Date: **25-Nov-2020 13:00**
Client ID: Run ID: **UV-2450_373407** SeqNo: **5851453** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.263	0.0250	0.25	0	105	85 - 115				

MS Sample ID: **HS20111255-01MS** Units: **mg/L** Analysis Date: **25-Nov-2020 13:00**
Client ID: **LH18/24-SP650_112420** Run ID: **UV-2450_373407** SeqNo: **5851456** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	5.29	0.250	2.5	2.82	98.8	80 - 120				

MSD Sample ID: **HS20111255-01MSD** Units: **mg/L** Analysis Date: **25-Nov-2020 13:00**
Client ID: **LH18/24-SP650_112420** Run ID: **UV-2450_373407** SeqNo: **5851455** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	5.34	0.250	2.5	2.82	101	80 - 120	5.29	0.941	20	

The following samples were analyzed in this batch: HS20111255-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20111255

QC BATCH REPORT

Batch ID: R373798 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-373798** Units: **mg/L** Analysis Date: **02-Dec-2020 17:00**
Client ID: Run ID: **WetChem_HS_373798** SeqNo: **5860430** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-373798** Units: **mg/L** Analysis Date: **02-Dec-2020 17:00**
Client ID: Run ID: **WetChem_HS_373798** SeqNo: **5860431** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.71	0.20	10	0	107	80 - 120				

MS Sample ID: **HS201111218-01MS** Units: **mg/L** Analysis Date: **02-Dec-2020 17:00**
Client ID: Run ID: **WetChem_HS_373798** SeqNo: **5860433** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.03	0.20	10	0.189	98.4	80 - 120				

MSD Sample ID: **HS201111218-01MSD** Units: **mg/L** Analysis Date: **02-Dec-2020 17:00**
Client ID: Run ID: **WetChem_HS_373798** SeqNo: **5860434** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.04	0.20	10	0.189	98.5	80 - 120	10.03	0.149	20	

The following samples were analyzed in this batch: HS20111255-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20111255**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20111255

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20111255-01	LH18/24-SP650_112420	Login	11/25/2020 11:41:11 AM	PMG	WET383
HS20111255-01	LH18/24-SP650_112420	Login	11/25/2020 11:41:11 AM	PMG	WET383
HS20111255-01	LH18/24-SP650_112420	Login	11/25/2020 11:41:11 AM	PMG	Sub
HS20111255-02	LH18/24-SP650_112420-AIX	Login	11/25/2020 11:41:11 AM	PMG	Sub

ALS Houston, US Date: 15-Dec-20

Sample Receipt Checklist

Work Order ID: HS20111255 **Date/Time Received:** **25-Nov-2020 10:45**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: /S/ Paresh M. Giga (eSignature) 25-Nov-2020 11:43 (Date/Time) **Reviewed by:** /S/ RJ Modashia (eSignature) 29-Nov-2020 11:31 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.2C U/c	IR31	
Cooler(s)/Kit(s):	46379		
Date/Time sample(s) sent to storage:	11/25/2020 11:50		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20111255
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_112420	Water	11/24/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_112420	Water	11/24/20 / 14:00		1			X		NONE	
LH18/24-SP650_112420_AIX	Water	11/24/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/24/20	14:30	JM	11/25/20	10:45						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:
46379 WC 1.2 #31 Client

(Word) S:\I-oes\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46379

CUSTODY SEAL

Date: 11/24/20 Time: 1430
Name: Scott Beesinger
Company: Bhate

Seal Broken By: GM
Date: 11/25/20

46379

NOV 25 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46379

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09SEP20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-6856
REF: ADDITIONAL BOTTLES – BO 73689 – RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1496

WED - 25 NOV AA
PRIORITY OVERNIGHT

XH SGRA

77099
TX-US
IAH

December 15, 2020 Service Request No:E2001171

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20111255

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 25, 2020
For your reference, these analyses have been assigned our service request number **E2001171.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001171
Project:	HS20111255	**Date Received:**	11/25/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/25/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000652: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001171
Project: HS20111255

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001171-001	LH18/24-SP650_112420_AIX	11/24/2020	1400

Service Request Summary

Folder #: **E2001171**
Client Name: ALS Environmental - US
Project Name: HS20111255
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/25/20
Internal Due Date: 12/11/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20111255
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 3B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001171-001	LH18/24-SP650_112420_AIX	Water	11/24/20 1400	**IV**

Service Request Summary

Folder #:	**E2001171**
Client Name:	ALS Environmental - US
Project Name:	HS20111255
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	11/25/20
Internal Due Date:	12/11/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20111255
EDD:	No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved

Location: EHRMS-WIC 3B

Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
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www.alsglobal.com

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Houston, TX 77099
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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15222**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20111255
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20111255-02**	**LH18/24-SP650_112420-AIX**	**Water**	**24 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			11 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Macaluso Date/Time: 11/25/20

Received By: Date/Time: 11/25/20 1200

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR31

Date/Time Received: 11/23/20 Initials: CH Date/Time Logged in: 11/24/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?
Were they intact? ○ Yes ○ No ✓ N/A
Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		11/24/20	1206	CH	3.3	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

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Houston, TX 77099
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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371244 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/9/20 13:32

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001169-001	LH18/24-SP650_112420_AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001170-001	LH18/24-SP140_112420	.01	6850/ClO4 DOD			Water	10mL	
3	E2001171-001	LH18/24-SP650_112420_AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2001182-001	HBW7_120320	.01	6850/ClO4 DOD			Water	10mL	
5	E2001182-002	HBW10_120320	.01	6850/ClO4 DOD			Water	10mL	
6	E2001182-003	HBW1_120320	.01	6850/ClO4 DOD			Water	10mL	
7	E2001182-004	HBW1_120320_a	.01	6850/ClO4 DOD			Water	10mL	
8	E2001182-005	GPW1_120320	.01	6850/ClO4 DOD			Water	10mL	
9	E2001182-006	GPW3_120320	.01	6850/ClO4 DOD			Water	10mL	
10	E2001186-001	LH18/24-SP650_120220-AIX	.01	6850/ClO4 DOD			Water	10mL	
11	E2001186-002	LH18/24-SP650_120220-Between	.01	6850/ClO4 DOD			Water	10mL	
12	EQ2000652-01	MB		6850/ClO4 DOD			Liquid	10mL	
13	EQ2000652-02	LCS		6850/ClO4 DOD			Liquid	10mL	
14	EQ2000652-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000652-01	1.00µL	EQ2000652-02	1.00µL	EQ2000652-03	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001169-001	100.00µL	E2001170-001	100.00µL	E2001171-001	100.00µL	E2001182-001	100.00µL	E2001182-002	100.00µL	E2001182-003	100.00µL
E2001182-004	100.00µL	E2001182-005	100.00µL	E2001182-006	100.00µL	E2001186-001	100.00µL	E2001186-002	100.00µL	EQ2000652-01	100.00µL
EQ2000652-02	100.00µL	EQ2000652-03	100.00µL								

Preparation Steps

Step: Preparation
Started: 12/9/20 13:32
Finished: 12/9/20 15:00
By: GRIVERA
Comments

Comments: _____

Preparation Information Benchsheet

Prep Run#: 371244
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 12/9/20 13:32

Reviewed By: GR Date: 12/9/20

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001171
Project:	HS20111255	**Date Collected:**	11/24/20 1400
Sample Matrix:	Water	**Date Received:**	11/25/20
Sample Name:	LH18/24-SP650_112420_AIX	**Units:**	µg/L
Lab Code:	E2001171-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	12/ 9/20	12/14/20 10:54	371244	706941	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001171
Project:	HS20111255	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000652-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:09	371244	706933	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20111255
Sample Matrix: Water

Service Request: E2001171
Date Analyzed: 12/13/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371244

	Lab Control Sample EQ2000652-02			Duplicate Lab Control Sample EQ2000652-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.111	0.100	111	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001171
Project:	HS20111255	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000652-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:17	371244	706933	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001171
Project:	HS20111255	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000652-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:25	371244	706933	

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December 11, 2020 **Analytical Report for Service Request No:** K2011142

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: ALS Houston DOD TOC / HS20111255

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 02, 2020
For your reference, these analyses have been assigned our service request number **K2011142.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

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Client: ALS Environmental - US
Project: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2011142
Date Received: 12/02/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 12/02/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Sydney A Wolfe Date 12/11/2020

Chain of Custody

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K2011142

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15221**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20111255
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20111255-01**	**LH18/24-SP650_112420**	**Water**	**24 Nov 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			11 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 11/30/2020 1800

Received By: ALS Date/Time: 12/2/20 1100

Cooler ID(s): _____ Temperature(s): _____

PM KL

Cooler Receipt and Preservation Form

Client AES-Houston Service Request K20 11142

Received: 12/2/20 Opened: 12/2/20 By: JM Unloaded: 12/2/20 By: K

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
0.1	—	IR02	15221	—	—	1891 8883 1797	

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2011142
Project:	ALS Houston DOD TOC/HS20111255	**Date Collected:**	11/24/20
Sample Matrix:	Water	**Date Received:**	12/2/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_112420	K2011142-001	**1.20**	0.50	0.20	0.07	1	12/09/20 09:59	
Method Blank	K2011142-MB	ND U	0.50	0.20	0.07	1	12/09/20 09:59	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2011142
Project:	ALS Houston DOD TOC/HS20111255	**Date Analyzed:**	12/09/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	706459

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2011142-LCS	24.5	25.0	98	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2011142
Project: ALS Houston DOD TOC/HS20111255

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	706459	KQ2019814-01	12/09/20 09:59	25.0	24.9	100	90-110
CCV2	706459	KQ2019814-02	12/09/20 09:59	25.0	24.6	98	90-110
CCV3	706459	KQ2019814-03	12/09/20 09:59	25.0	24.5	98	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2011142
Project: ALS Houston DOD TOC/HS20111255

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	706459	KQ2019814-04	12/09/20 09:59	0.50	0.20	0.07	ND	U
CCB2	706459	KQ2019814-05	12/09/20 09:59	0.50	0.20	0.07	ND	U
CCB3	706459	KQ2019814-06	12/09/20 09:59	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # Original (_____) K2010781, 0818, 0819, 0820, 0847, 0852, 1070, 0821, 0852, 1142

Tier: II II II II II II II I II IV

Date Analyzed: 12/9/20

Analyst: MAS

Run # 706307, 706459

Analysis: SM5310C/TOCT

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	(yes)/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	(yes)/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
9.	Are results for methods blanks all ND?	(yes)/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/(no)/NA
11.	Are all exceptions explained?	(yes)/no/NA
12.	Have all applicable service requests been reviewed?	(yes)/no/NA
13.	Are all samples labeled correctly?	(yes)/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	(yes)/no/NA
15.	Are detection limits and units reported correctly?	(yes)/no/NA
16.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/(no)/NA

COMMENTS:

- RSD between K2010818-006 & Dup was high but results were less than 5x MRL.

Final Approved by: _____ Date: 12/10/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MSPECHT **Analysis Lot:** 706307 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2010781-001	Carbon, Total Organic	N/A		Water	1.08 mg/L	10 mL	1.08 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010781-002	Carbon, Total Organic	N/A		Water	5.01 mg/L	10 mL	5.01 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010781-003	Carbon, Total Organic	N/A		Water	10.36 mg/L	10 mL	10.4 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010781-004	Carbon, Total Organic	N/A		Water	1.00 mg/L	10 mL	1.00 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010781-005	Carbon, Total Organic	N/A		Water	0.55 mg/L	10 mL	0.55 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010781-006	Carbon, Total Organic	N/A		Water	0.42 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010781-007	Carbon, Total Organic	N/A		Water	1.59 mg/L	10 mL	1.59 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010781-008	Carbon, Total Organic	N/A		Water	0.31 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010818-005	Carbon, Total Organic	N/A		Water	0.84 mg/L	10 mL	0.84 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010818-006	Carbon, Total Organic	N/A		Water	0.21 mg/L	10 mL	0.21 mg/L J	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010818-007	Carbon, Total Organic	N/A		Water	0.26 mg/L	10 mL	0.26 mg/L J	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010819-004	Carbon, Total Organic	N/A		Water	0.16 mg/L	10 mL	0.16 mg/L J	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010820-001	Carbon, Total Organic	N/A		Water	0.17 mg/L	10 mL	0.17 mg/L J	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010847-001	Carbon, Total Organic	N/A		Water	0.38 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-002	Carbon, Total Organic	N/A		Water	30.43 mg/L	10 mL	30.4 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-003	Carbon, Total Organic	N/A		Water	30.82 mg/L	10 mL	30.8 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-004	Carbon, Total Organic	N/A		Water	16.25 mg/L	10 mL	16.2 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-005	Carbon, Total Organic	N/A		Water	37.42 mg/L	10 mL	37.4 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2011070-001	Carbon, Total Organic	N/A		Water	1.79 mg/L	10 mL	1.79 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2011070-002	Carbon, Total Organic	N/A		Water	0.81 mg/L	10 mL	0.81 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
KQ2019813-01	Carbon, Total Organic	CCV		Water	25.21 mg/L	10 mL	25.2 mg/L	1					12/9/20 09:59:00	N	II
KQ2019813-02	Carbon, Total Organic	CCV		Water	25.48 mg/L	10 mL	25.5 mg/L	1					12/9/20 09:59:00	N	II
KQ2019813-03	Carbon, Total Organic	CCV		Water	24.95 mg/L	10 mL	24.9 mg/L	1					12/9/20 09:59:00	N	II
KQ2019813-04	Carbon, Total Organic	CCV		Water	24.58 mg/L	10 mL	24.6 mg/L	1					12/9/20 09:59:00	N	II
KQ2019813-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
KQ2019813-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
KQ2019813-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
KQ2019813-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
KQ2019813-09	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
KQ2019813-10	Carbon, Total Organic	LCS		Water	24.88 mg/L	10 mL	24.9 mg/L	1	0.07	0.50	100		12/9/20 09:59:00	N	II
KQ2019813-11	Carbon, Total Organic	MS	K2010818-006	Water	26.44 mg/L	10 mL	26.4 mg/L	1	0.07	0.50	105		12/9/20 09:59:00	N	II
KQ2019813-12	Carbon, Total Organic	DUP	K2010818-006	Water	0.44 mg/L	10 mL	0.44 mg/L J	1	0.07	0.50		69*	12/9/20 09:59:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MSPECHT **Analysis Lot:** 706459 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2010821-001	Carbon, Total Organic	N/A		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	I
K2010821-002	Carbon, Total Organic	N/A		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	I
K2010852-006	Carbon, Total Organic	N/A		Water	37.46 mg/L	10 mL	37.5 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-007	Carbon, Total Organic	N/A		Water	1.35 mg/L	10 mL	1.35 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-008	Carbon, Total Organic	N/A		Water	0.04 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-009	Carbon, Total Organic	N/A		Water	0.02 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-010	Carbon, Total Organic	N/A		Water	0.30 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-011	Carbon, Total Organic	N/A		Water	0.36 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	II
K2010852-012	Carbon, Total Organic	N/A		Water	0.64 mg/L	10 mL	0.64 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	II
K2011142-001	Carbon, Total Organic	N/A		Water	1.20 mg/L	10 mL	1.20 mg/L	1	0.07	0.50			12/9/20 09:59:00	N	IV
KQ2019814-01	Carbon, Total Organic	CCV		Reagent Water	24.95 mg/L	10 mL	24.9 mg/L	1					12/9/20 09:59:00	N	I
KQ2019814-02	Carbon, Total Organic	CCV		Reagent Water	24.58 mg/L	10 mL	24.6 mg/L	1					12/9/20 09:59:00	N	I
KQ2019814-03	Carbon, Total Organic	CCV		Reagent Water	24.54 mg/L	10 mL	24.5 mg/L	1					12/9/20 09:59:00	N	I
KQ2019814-04	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	I
KQ2019814-05	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	I
KQ2019814-06	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	I
KQ2019814-07	Carbon, Total Organic	MB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/9/20 09:59:00	N	I
KQ2019814-08	Carbon, Total Organic	LCS		Reagent Water	24.53 mg/L	10 mL	24.5 mg/L	1	0.07	0.50	98		12/9/20 09:59:00	N	I
KQ2019814-09	Carbon, Total Organic	MS	K2010852-011	Water	26.41 mg/L	10 mL	26.4 mg/L	1	0.07	0.50	106		12/9/20 09:59:00	N	II
KQ2019814-10	Carbon, Total Organic	DUP	K2010852-011	Water	0.41 mg/L	10 mL	0.41 mg/L J	1	0.07	0.50		NC	12/9/20 09:59:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Schedule: 12082020

Version: 2
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/12/09 19:35 - Wednesday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2011070-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2011070-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2010781-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2010781-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2010781-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2010781-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2010781-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2010781-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2010781-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2010781-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2010818-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2010818-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2010818-006 DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2010818-006 MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2010818-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2010819-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2010820-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2010847-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2010852-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2010852-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2010852-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2010852-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2010821-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2010821-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2011142-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
29	Sample	K2010852-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2010852-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2010852-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	K2010852-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
33	Sample	K2010852-010	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2010852-011	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	K2010852-011 DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2010852-011 MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
37	Sample	K2010852-012	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
39	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready

Schedule: 12082020

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
40	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
41	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 12082020
Wednesday, December 09, 2020 09:59 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/12/10 09:54 - Thursday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	12082020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1) Fusion1 (Fusion1) (v2)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
*	(clean)		Clean	2020/12/09 09:59

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.01	25.66	13.65	49.77	05:26
2	TC Clean	10.04	22.97	12.93	50.27	04:04
3	TC Clean	2.55	15.50	12.95	50.05	03:48
4	TC Clean	1.65	14.52	12.87	50.49	03:52

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
*	(clean)		Clean	2020/12/09 10:21

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	11.98	24.95	12.97	49.28	05:14
2	TC Clean	4.82	17.99	13.16	50.35	04:08
3	TC Clean	1.07	14.27	13.20	50.34	03:56
4	TC Clean	1.25	14.02	12.77	50.15	03:57

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/12/09 10:43

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.30	12.53	12.84	49.25	05:24
2	TC Clean	3.89	16.85	12.96	50.41	04:05
3	TC Clean	0.54	13.44	12.90	50.28	03:49
4	TC Clean	0.65	13.34	12.68	50.42	03:58

Sample Type: Blank (Creating v1491) From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/12/09 11:06

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.14	12.47	12.61	49.73	05:22
2	TC Clean	3.68	16.34	12.66	50.34	04:07
3	TC Clean	0.88	13.61	12.73	50.16	03:55
4	TC Clean	0.88	13.64	12.77	50.00	03:57
5	Reagent Blank	4.55	17.08	12.53	50.40	05:09
6	Acid Blank	0.17	12.65	12.48	49.44	05:30

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.3069 ppm	0.0000 ppm	0.0000%	2020/12/09 11:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3069	3.0690	11.36	24.12	12.77	50.64	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2112 ppm (PASS)	0.0000 ppm	0%	2020/12/09 11:54

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2112	252.1116	186.74	199.48	12.73	50.64	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/09 12:09

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.36	20.22	12.86	50.59	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	1	TOC	ICS	0.0305 ppm	0.0000 ppm	0.0000%	2020/12/09 12:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0305	0.3048	9.42	22.12	12.70	50.60	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	2	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/09 12:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.74	19.50	12.76	50.58	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.8846 ppm (PASS)	0.0000 ppm	0%	2020/12/09 12:53

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.8846	248.8457	184.45	196.99	12.54	50.57	10:35

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	K2011070-001	1.7899 ppm	0.1454 ppm	8.1200%	2020/12/09 13:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8927	18.9268	22.48	34.88	12.40	50.56	10:29
2	TOC	1.6871	16.8711	21.04	33.53	12.49	50.50	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	4	TOC	K2011070-002	0.8056 ppm	0.1283 ppm	15.9300%	2020/12/09 13:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8964	8.9636	15.49	28.02	12.52	50.48	10:30
2	TOC	0.7149	7.1489	14.22	26.75	12.53	50.43	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2010781-001	1.0757 ppm	0.0266 ppm	2.4700%	2020/12/09 14:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0945	10.9451	16.88	29.38	12.49	50.47	10:28
2	TOC	1.0569	10.5688	16.62	29.05	12.43	50.52	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K2010781-002	5.0114 ppm	0.2394 ppm	4.7800%	2020/12/09 14:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.1807	51.8072	45.55	58.29	12.74	50.61	10:28
2	TOC	4.8421	48.4215	43.17	55.65	12.48	50.65	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	K2010781-003	10.3627 ppm	0.0207 ppm	0.2000%	2020/12/09 15:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.3773	103.7728	82.00	94.63	12.63	50.67	10:26
2	TOC	10.3481	103.4806	81.80	94.16	12.36	50.70	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	K2010781-004	1.0016 ppm	0.0164 ppm	1.6400%	2020/12/09 15:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9900	9.9002	16.15	28.91	12.76	50.69	10:26
2	TOC	1.0133	10.1326	16.31	28.94	12.62	50.60	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	K2010781-005	0.5454 ppm	0.0411 ppm	7.5400%	2020/12/09 15:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5745	5.7447	13.24	25.97	12.73	50.56	10:27
2	TOC	0.5163	5.1631	12.83	25.54	12.71	50.52	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.4802 ppm	0.0000 ppm	0%	2020/12/09 16:24

						(PASS)				

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.4802	254.8017	188.63	201.18	12.55	50.53	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/09 16:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.01	19.62	12.61	50.47	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2010781-006	0.4237 ppm	0.0574 ppm	13.5400%	2020/12/09 16:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4643	4.6428	12.46	25.05	12.59	50.46	10:28
2	TOC	0.3832	3.8316	11.89	24.51	12.62	50.45	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2010781-007	1.5932 ppm	0.1875 ppm	11.7700%	2020/12/09 17:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7257	17.2575	21.31	33.79	12.48	50.50	10:26
2	TOC	1.4606	14.6059	19.45	32.13	12.67	50.44	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis	Sample ID	Result (ppmC)	Std. Dev.	RSD	Start Time

		Type			(ppmC)		
◆	12	TOC	K2010781-008	0.3121 ppm	0.0434 ppm	13.9200%	2020/12/09 17:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3428	3.4282	11.61	24.18	12.56	50.53	10:28
2	TOC	0.2814	2.8138	11.18	24.00	12.82	50.57	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2010818-005	0.8427 ppm	0.0017 ppm	0.2000%	2020/12/09 18:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8439	8.4390	15.13	27.96	12.84	50.51	10:26
2	TOC	0.8415	8.4148	15.11	27.87	12.76	50.53	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2010818-006	0.2147 ppm	0.0038 ppm	1.7800%	2020/12/09 18:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2120	2.1195	10.69	23.37	12.68	50.52	10:27
2	TOC	0.2174	2.1737	10.73	23.44	12.71	50.58	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2010818-006 DUP	0.4432 ppm	0.0417 ppm	9.4200%	2020/12/09 19:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4137	4.1367	12.11	24.90	12.79	50.60	10:28
2	TOC	0.4727	4.7269	12.52	25.13	12.61	50.62	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2010818-006 MS	26.4425 ppm	0.2261 ppm	0.8600%	2020/12/09 19:42

Rep	Base			Adjusted		Baseline	Pressure	Run

#	Analysis Type	ppm	µg	(Abs)	NDIR (Abs)	(Abs)	(psig)	Time
1	TOC	26.6023	266.0234	195.82	208.60	12.79	50.61	10:27
2	TOC	26.2826	262.8259	193.57	206.25	12.67	50.63	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	17	TOC	K2010818-007	0.2594 ppm	0.0412 ppm	15.9000%	2020/12/09 20:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2885	2.8851	11.23	24.10	12.87	50.63	10:29
2	TOC	0.2302	2.3020	10.82	23.39	12.57	50.65	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	18	TOC	K2010819-004	0.1643 ppm	0.0384 ppm	23.3800%	2020/12/09 20:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1914	1.9143	10.55	23.33	12.78	50.65	10:29
2	TOC	0.1371	1.3711	10.17	22.86	12.70	50.65	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	19	TOC	K2010820-001	0.1748 ppm	0.0150 ppm	8.5900%	2020/12/09 21:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1854	1.8544	10.51	23.20	12.70	50.65	10:28
2	TOC	0.1642	1.6420	10.36	23.15	12.79	50.68	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.9467 ppm (PASS)	0.0000 ppm	0%	2020/12/09 21:34

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

B	TOC	25 ppm	1	24.9467	249.4672	184.89	197.56	12.67	50.66	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/09 21:49

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.01	18.89	12.87	50.67	10:35

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/09 22:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.54	18.17	12.63	50.69	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.5255 ppm (PASS)	0.0000 ppm	0%	2020/12/09 22:18

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.5255	245.2547	181.93	194.75	12.82	50.68	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	21	TOC	K2010847-001	0.3792 ppm	0.0388 ppm	10.2300%	2020/12/09 22:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4067	4.0668	12.06	24.97	12.91	50.67	10:28
2	TOC	0.3518	3.5180	11.67	24.57	12.90	50.68	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	22	TOC	K2010852-002	30.4277 ppm	0.2562 ppm	0.8400%	2020/12/09 23:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	30.2465	302.4648	221.38	234.26	12.88	50.66	10:27
2	TOC	30.6089	306.0886	223.92	236.79	12.87	50.67	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	23	TOC	K2010852-003	30.8187 ppm	0.2528 ppm	0.8200%	2020/12/09 23:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	30.6399	306.3993	224.14	237.15	13.01	50.67	10:30
2	TOC	30.9975	309.9746	226.65	239.68	13.03	50.68	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	24	TOC	K2010852-004	16.2473 ppm	0.1488 ppm	0.9200%	2020/12/09 23:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	16.3525	163.5248	123.92	136.66	12.74	50.72	10:25
2	TOC	16.1421	161.4207	122.44	135.40	12.96	50.76	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	25	TOC	K2010852-005	37.4243 ppm	0.2119 ppm	0.5700%	2020/12/10 00:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	37.2745	372.7445	270.68	283.71	13.03	50.83	10:29
2	TOC	37.5741	375.7410	272.78	285.78	13.00	50.83	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2010821-001	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/10 00:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.02	22.02	13.00	50.87	10:27
2	TOC	0.0000	0.0000	7.24	20.26	13.02	50.87	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2010821-002	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/10 01:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.84	18.67	12.82	50.91	10:29
2	TOC	0.0000	0.0000	5.68	18.65	12.97	50.88	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2011142-001	1.2025 ppm	0.1255 ppm	10.4400%	2020/12/10 01:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2912	12.9124	18.26	31.32	13.05	50.91	10:25
2	TOC	1.1138	11.1376	17.02	29.88	12.87	50.90	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2010852-006	37.4616 ppm	0.0173 ppm	0.0500%	2020/12/10 02:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	37.4494	374.4937	271.91	284.79	12.88	50.91	10:30
2	TOC	37.4739	374.7389	272.08	285.25	13.17	50.94	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	30	TOC	K2010852-007	1.3530 ppm	0.1951 ppm	14.4200%	2020/12/10 02:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.4910	14.9096	19.67	33.02	13.35	50.93	10:30
2	TOC	1.2151	12.1511	17.73	30.85	13.12	50.94	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	31	TOC	K2010852-008	0.0385 ppm	0.0470 ppm	122.1200%	2020/12/10 03:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0717	0.7168	9.71	22.64	12.93	50.96	10:26
2	TOC	0.0052	0.0525	9.24	22.15	12.91	50.95	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	32	TOC	K2010852-009	0.0243 ppm	0.0029 ppm	12.0400%	2020/12/10 03:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0263	0.2635	9.39	22.49	13.09	50.99	10:29
2	TOC	0.0222	0.2221	9.36	22.59	13.23	51.01	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.5821 ppm (PASS)	0.0000 ppm	0%	2020/12/10 04:09

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.5821	245.8207	182.33	195.47	13.14	51.00	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/10 04:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.58	18.74	13.16	50.99	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	33	TOC	K2010852-010	0.3037 ppm	0.0124 ppm	4.0800%	2020/12/10 04:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2949	2.9492	11.28	24.43	13.16	51.00	10:29
2	TOC	0.3125	3.1246	11.40	24.55	13.15	51.01	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K2010852-011	0.3571 ppm	0.0408 ppm	11.4300%	2020/12/10 05:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3860	3.8601	11.91	25.07	13.16	51.03	10:24
2	TOC	0.3283	3.2828	11.51	24.89	13.38	51.03	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K2010852-011 DUP	0.4050 ppm	0.0643 ppm	15.8800%	2020/12/10 05:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4504	4.5045	12.37	25.54	13.17	51.05	10:29
2	TOC	0.3595	3.5950	11.73	25.02	13.29	51.03	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

		Analysis			Std. Dev.		

	Pos	Type	Sample ID	Result (ppmC)	(ppmC)	RSD	Start Time
◆	36	TOC	K2010852-011 MS	26.4060 ppm	0.1588 ppm	0.6000%	2020/12/10 06:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	26.2937	262.9371	193.65	206.96	13.31	51.00	10:29
2	TOC	26.5182	265.1824	195.23	208.38	13.15	50.99	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	K2010852-012	0.6393 ppm	0.0205 ppm	3.2000%	2020/12/10 06:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6537	6.5373	13.79	27.10	13.31	50.97	10:28
2	TOC	0.6248	6.2479	13.59	26.81	13.22	50.97	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2062 (IC) (v1491)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.5416 ppm (PASS)	0.0000 ppm	0%	2020/12/10 06:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.5416	245.4158	182.05	195.30	13.26	50.96	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/10 07:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.79	18.97	13.18	50.91	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria	Do Nothing	CAS_salt_010711	CAS_salt_010711	0 ppmC

met. (v4) (v38)

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1490	1.7157	0.2360	0.0000	0.0000	0.0000	2020/12/08 22:11	Fusion1 (Fusion1)
v1491	1.5167	0.1670	0.0000	0.0000	0.0000	2020/12/09 11:40	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version: v38
Ver Creation: 2020/06/13 16:40
Comment:
Operator: Fusion1 (Fusion1)
Basic Analysis Type: TOC
Calibration curve formula: TOC: y = 7.015x + 9.892
r^2 value: TOC: r^2 = 0.99974

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25
50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version: v4
Ver Creation: 2019/02/21 17:57
Comment:
Operator: Fusion1 (Fusion1)

Parameter	Value	Advanced Parameter	Value
SampleVolume	10.0 mL	NeedleRinseVolume	5.0 ml
Dilution	1:10	VialPrimeVolume	2.0 ml
AcidVolume	0.5 ml	ICSamplePrimeVolume	2.0 ml

ReagentVolume	2.0 ml	ICSpargeRinseVolume	12.0 ml
UVReactorPrerinse	Off	BaselineStabilizeTime	0.70 min
UVReactorPrerinseVolume	5.0	DetectorPressureFlow	150 ml/min
NumberOfUVReactorPrerinses	1	SyringeSpeedWaste	10
ICSpargeTime	1.00 mins	SyringeSpeedAcid	7
DetectorSweepFlow	500 ml/min	SyringeSpeedReagent	7
PreSpargeTime	2.00 mins	SyringeSpeedDIWater	7
SystemFlow	500 ml/min	NDIRPressurization	60 psig
		SyringeSpeedSampleDispense	5
		SyringeSpeedSampleAspirate	4
		SyringeSpeedUVDispense	5
		SyringeSpeedUVAspirate	5
		SyringeSpeedICDispense	5
		SyringeSpeedICAspirate	5
		NDIRPressureStabilize	1.75 min
		SampleMixing	Off
		SampleMixingCycles	1
		SampleMixingVolume	10.0
		LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/12/10 07:29

ALS Environmental

StarLIMS Run: 706307,706459

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-55J 50 ppm LCS: 19-GEN-8-57K 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-58F

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-55I 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-60D

21 % H3PO4: 19-GEN-08-59H

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MAS	Date Analyzed: 12/9/2020
Reviewed By:	Date Reviewed: 12/15/20

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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December 15, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20111258**

Laboratory Results for: **Groundwater Treatment Plant Quarterly Influent Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 25, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
Work Order: HS20111258

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20111258-01	LH18/24-SP140_112420	Water		24-Nov-2020 14:00	25-Nov-2020 10:45	☐
HS20111258-02	Trip Blank	Water	CG-102720-213	24-Nov-2020 14:00	25-Nov-2020 10:45	☐

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Groundwater Treatment Plant Quarterly Influent Samples
Work Order: HS20111258

Work Order Comments

• The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160215

Sample ID: LH18/24-SP140_112420 (HS20111258-01)

• The GCMS semi-volatile extract of this sample was run at a dilution due to a high level of matrix interference.

• The surrogate recoveries could not be determined due to dilution below the calibration range.

Sample ID: LCSD-160215

• The RPD between the LCS and LCSD was outside of the control limit.

GCMS Volatiles by Method SW8260

Batch ID: R374019

Sample ID: HS20120235-06MS

• MS and MSD are for an unrelated sample

Batch ID: R374144

Sample ID: HS20120240-10MS

• MS and MSD are for an unrelated sample

Metals by Method SW7470

Batch ID: 160524

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 160306

Sample ID: LH18/24-SP140_112420 (HS20111258-01MS)

• Cobalt, Lead, Nickel, Silver, Zinc failed for MS/MSD but passed for PDS.
Aluminum failed for MS but passed for MSD and PDS.

• The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount.
Barium, Calcium, Magnesium, Manganese, Sodium

Sample ID: LH18/24-SP140_112420 (HS20111258-01PDS)

• The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount.
Barium

Sample ID: LH18/24-SP140_112420 (HS20111258-01SD)

• The percent difference between the results of the sample and the serial dilution were greater than 10%. (Aluminum)

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Groundwater Treatment Plant Quarterly Influent Samples
Work Order: HS20111258

WetChemistry by Method E1664A

Batch ID: R374473

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9056

Batch ID: R374453

Sample ID: HS20120243-01MS

- MS and MSD are for an unrelated sample (Chloride)

WetChemistry by Method E410.4

Batch ID: R374243

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20111258
Sample ID: LH18/24-SP140_112420 Lab ID:HS20111258-01
Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: QX
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 15:26
1,1,1-Trichloroethane	**0.62**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	05-Dec-2020 15:26
1,1,2-Trichloroethane	**0.87**	J	**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
1,1-Dichloroethane	**2.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
1,1-Dichloroethene	**52**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
1,1-Dichloropropene	**5.4**		**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 15:26
1,2,3-Trichloropropane	**26**		**0.50**	**1.0**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	05-Dec-2020 15:26
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 15:26
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 15:26
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	05-Dec-2020 15:26
1,2-Dichloroethane	**21**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	05-Dec-2020 15:26
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 15:26
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 15:26
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 15:26
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 15:26
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	05-Dec-2020 15:26
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	05-Dec-2020 15:26
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 15:26
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	05-Dec-2020 15:26
Acetone	**160**		**0.40**	**1.0**	**2.0**	**ug/L**	1	05-Dec-2020 15:26
Benzene	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 15:26
Bromochloromethane	**1.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Bromoform	**1.3**		**0.40**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	05-Dec-2020 15:26
Carbon tetrachloride	**3.0**		**0.50**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Chloroethane	**33**		**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Chloroform	**5.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20111258
Sample ID: LH18/24-SP140_112420 Lab ID:HS20111258-01
Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: QX
Chloromethane	**1.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
cis-1,2-Dichloroethene	**1,400**		**5.0**	**12**	**25**	**ug/L**	25	07-Dec-2020 11:34
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Dichlorodifluoromethane	**5.8**		**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	05-Dec-2020 15:26
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	05-Dec-2020 15:26
Methylene chloride	**500**		**10**	**25**	**50**	**ug/L**	25	07-Dec-2020 11:34
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 15:26
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 15:26
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 15:26
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Tetrachloroethene	**28**		**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Toluene	**0.84**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
trans-1,2-Dichloroethene	**5.6**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 15:26
Trichloroethene	**1,900**		**5.0**	**12**	**25**	**ug/L**	25	07-Dec-2020 11:34
Trichlorofluoromethane	**4.1**		**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Vinyl chloride	**69**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 15:26
Surr: 1,2-Dichloroethane-d4	*96.7*			**0**	*81-118*	*%REC*	*1*	*05-Dec-2020 15:26*
Surr: 1,2-Dichloroethane-d4	*92.9*			**0**	*81-118*	*%REC*	*25*	*07-Dec-2020 11:34*
Surr: 4-Bromofluorobenzene	*97.3*			**0**	*85-114*	*%REC*	*1*	*05-Dec-2020 15:26*
Surr: 4-Bromofluorobenzene	*94.8*			**0**	*85-114*	*%REC*	*25*	*07-Dec-2020 11:34*
Surr: Dibromofluoromethane	*90.8*			**0**	*80-119*	*%REC*	*1*	*05-Dec-2020 15:26*
Surr: Dibromofluoromethane	*90.9*			**0**	*80-119*	*%REC*	*25*	*07-Dec-2020 11:34*
Surr: Toluene-d8	*100*			**0**	*89-112*	*%REC*	*1*	*05-Dec-2020 15:26*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*25*	*07-Dec-2020 11:34*
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 01-Dec-2020		Analyst: ACN
1,4-Dioxane	**4.2**		**1.0**	**1.0**	**1.0**	**ug/L**	100	11-Dec-2020 14:02
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*11-Dec-2020 14:02*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*11-Dec-2020 14:02*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*11-Dec-2020 14:02*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20111258
Sample ID: LH18/24-SP140_112420 Lab ID:HS20111258-01
Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 03-Dec-2020		Analyst: JHD
Aluminum	**0.124**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	10-Dec-2020 16:08
Antimony	**0.000879**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2020 16:08
Arsenic	**0.000811**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2020 16:08
Barium	**0.663**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	10-Dec-2020 16:08
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	10-Dec-2020 16:08
Cadmium	**0.000361**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	10-Dec-2020 16:08
Calcium	**35.5**		**0.340**	**0.500**	**5.00**	**mg/L**	10	11-Dec-2020 12:32
Chromium	**0.00248**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2020 16:08
Cobalt	**0.00459**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	10-Dec-2020 16:08
Iron	**0.798**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	10-Dec-2020 16:08
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	10-Dec-2020 16:08
Magnesium	**24.8**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	10-Dec-2020 16:08
Manganese	**0.352**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	10-Dec-2020 16:08
Nickel	**0.0132**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2020 16:08
Potassium	**1.41**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	10-Dec-2020 16:08
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	10-Dec-2020 16:08
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	10-Dec-2020 16:08
Sodium	**173**		**0.140**	**0.500**	**2.00**	**mg/L**	10	11-Dec-2020 12:32
Thallium	**0.000241**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	10-Dec-2020 16:08
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	10-Dec-2020 16:08
Zinc	**0.157**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	10-Dec-2020 16:08
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 09-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	10-Dec-2020 13:54
OIL & GREASE (HEM) BY E1664A		**Method:E1664A**						Analyst: KAH
Oil and Grease	2.00	U	0.610	2.00	2.00	mg/L	1	11-Dec-2020 14:20
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**						Analyst: TH
Chemical Oxygen Demand	**8.00**	J	**5.00**	**15.0**	**15.0**	**mg/L**	1	09-Dec-2020 10:30
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**368**		**4.00**	**10.0**	**10.0**	**mg/L**	20	11-Dec-2020 05:10
Sulfate	**23.9**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Dec-2020 04:52
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	15-Dec-2020 18:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20111258
Sample ID: Trip Blank Lab ID:HS20111258-02
Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: QX
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 13:41
1,2,3-Trichloropropane	**27**		**0.50**	**1.0**	**1.0**	**ug/L**	1	05-Dec-2020 13:41
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	05-Dec-2020 13:41
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	05-Dec-2020 13:41
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 13:41
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 13:41
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	05-Dec-2020 13:41
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	05-Dec-2020 13:41
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 13:41
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
4-Methyl-2-pentanone	**1.0**	J	**0.70**	**2.0**	**2.0**	**ug/L**	1	05-Dec-2020 13:41
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	05-Dec-2020 13:41
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 13:41
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Bromoform	**1.0**		**0.40**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 13:41
Bromomethane	**0.63**	J	**0.40**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 13:41
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	05-Dec-2020 13:41
Carbon tetrachloride	**7.6**		**0.50**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 13:41
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Groundwater Treatment Plant Quarterly Influent Samples WorkOrder:HS20111258

Sample ID: Trip Blank Lab ID:HS20111258-02

Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: QX
Chloromethane	**1.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 13:41
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	05-Dec-2020 13:41
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	05-Dec-2020 13:41
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	05-Dec-2020 13:41
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 13:41
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 13:41
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 13:41
Surr: 1,2-Dichloroethane-d4	*89.9*			**0**	*81-118*	*%REC*	*1*	*05-Dec-2020 13:41*
Surr: 4-Bromofluorobenzene	*95.1*			**0**	*85-114*	*%REC*	*1*	*05-Dec-2020 13:41*
Surr: Dibromofluoromethane	*88.8*			**0**	*80-119*	*%REC*	*1*	*05-Dec-2020 13:41*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*05-Dec-2020 13:41*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

Batch ID: 160215 **Start Date:** 01 Dec 2020 07:59 **End Date:** 01 Dec 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20111258-01	1	1000 (mL)	1 (mL)	0.001

Batch ID: 160306 **Start Date:** 03 Dec 2020 11:00 **End Date:** 03 Dec 2020 15:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20111258-01		10 (mL)	10 (mL)	1

Batch ID: 160524 **Start Date:** 10 Dec 2020 08:00 **End Date:** 10 Dec 2020 10:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20111258-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160215 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00		01 Dec 2020 07:59	11 Dec 2020 14:02	100
Batch ID: 160306 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00		03 Dec 2020 15:00	11 Dec 2020 12:32	10
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00		03 Dec 2020 15:00	10 Dec 2020 16:08	1
Batch ID: 160524 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00		09 Dec 2020 11:45	10 Dec 2020 13:54	1
Batch ID: R374019 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00			05 Dec 2020 15:26	1
HS20111258-02	Trip Blank	24 Nov 2020 14:00			05 Dec 2020 13:41	1
Batch ID: R374144 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00			07 Dec 2020 11:34	25
Batch ID: R374243 (0)	**Test Name :** CHEMICAL OXYGEN DEMAND BY E410.4				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00			09 Dec 2020 10:30	1
Batch ID: R374453 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00			11 Dec 2020 05:10	20
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00			11 Dec 2020 04:52	1
Batch ID: R374473 (0)	**Test Name :** OIL & GREASE (HEM) BY E1664A				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00			11 Dec 2020 14:20	1
Batch ID: R374695 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20111258-01	LH18/24-SP140_112420	24 Nov 2020 14:00			15 Dec 2020 18:35	1

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160306** Units: **mg/L** Analysis Date: **10-Dec-2020 16:18**
Client ID: Run ID: **ICPMS04_374333** SeqNo: **5873677** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.007427	0.0100								J
Antimony	0.002151	0.00500								J
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.01893	0.200								J
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.1485	0.200								J
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

LCS Sample ID: **LCS-160306** Units: **mg/L** Analysis Date: **11-Dec-2020 12:53**
Client ID: Run ID: **ICPMS04_374425** SeqNo: **5876321** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1072	0.0100	0.1	0	107	84 - 117				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-160306** Units: **mg/L** Analysis Date: **10-Dec-2020 16:06**
Client ID: Run ID: **ICPMS04_374333** SeqNo: **5873671** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05297	0.00500	0.05	0	106	85 - 117				
Arsenic	0.05306	0.00500	0.05	0	106	84 - 116				
Barium	0.05264	0.00500	0.05	0	105	86 - 114				
Beryllium	0.05272	0.00200	0.05	0	105	83 - 121				
Cadmium	0.05341	0.00200	0.05	0	107	87 - 115				
Calcium	5.193	0.500	5	0	104	87 - 118				
Chromium	0.05145	0.00500	0.05	0	103	85 - 116				
Cobalt	0.05081	0.00500	0.05	0	102	86 - 115				
Iron	5.353	0.200	5	0	107	87 - 118				
Lead	0.0506	0.00500	0.05	0	101	88 - 115				
Magnesium	5.712	0.200	5	0	114	83 - 118				
Manganese	0.05285	0.00500	0.05	0	106	87 - 115				
Nickel	0.05231	0.00500	0.05	0	105	85 - 117				
Potassium	5.611	0.200	5	0	112	87 - 115				
Selenium	0.05555	0.00500	0.05	0	111	80 - 120				
Silver	0.04614	0.00500	0.05	0	92.3	85 - 116				
Sodium	5.577	0.200	5	0	112	85 - 117				
Thallium	0.05348	0.00200	0.05	0	107	82 - 116				
Vanadium	0.0511	0.00500	0.05	0	102	86 - 115				
Zinc	0.05613	0.00500	0.05	0	112	83 - 119				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20111258-01MS** Units: **mg/L** Analysis Date: **10-Dec-2020 16:12**
Client ID: **LH18/24-SP140_112420** Run ID: **ICPMS04_374333** SeqNo: **5873674** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2059	0.0100	0.1	0.1242	81.8	84 - 117				S
Antimony	0.04625	0.00500	0.05	0.000879	90.7	85 - 117				
Arsenic	0.0471	0.00500	0.05	0.000811	92.6	84 - 116				
Barium	0.6633	0.00500	0.05	0.6627	1.25	86 - 114				SO
Beryllium	0.04759	0.00200	0.05	0.000152	94.9	83 - 121				
Cadmium	0.0462	0.00200	0.05	0.000361	91.7	87 - 115				
Calcium	38.65	0.500	5	36.18	49.4	87 - 118				SO
Chromium	0.04595	0.00500	0.05	0.002484	86.9	85 - 116				
Cobalt	0.04679	0.00500	0.05	0.004591	84.4	86 - 115				S
Iron	5.258	0.200	5	0.7977	89.2	87 - 118				
Lead	0.04267	0.00500	0.05	0.000285	84.8	88 - 115				S
Magnesium	28.04	0.200	5	24.82	64.4	83 - 118				SO
Manganese	0.3809	0.00500	0.05	0.352	57.7	87 - 115				SO
Nickel	0.0549	0.00500	0.05	0.01324	83.3	85 - 117				S
Potassium	6.115	0.200	5	1.415	94.0	87 - 115				
Selenium	0.0492	0.00500	0.05	0.000397	97.6	80 - 120				
Silver	0.03865	0.00500	0.05	0.00001	77.3	85 - 116				S
Sodium	173.5	0.200	5	179.7	-125	85 - 117				SO
Thallium	0.04185	0.00200	0.05	0.000241	83.2	82 - 116				
Vanadium	0.0455	0.00500	0.05	0.000535	89.9	86 - 115				
Zinc	0.1926	0.00500	0.05	0.1566	72.1	83 - 119				S

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20111258-01MSD** Units: **mg/L** Analysis Date: **10-Dec-2020 16:14**
Client ID: **LH18/24-SP140_112420** Run ID: **ICPMS04_374333** SeqNo: **5873675** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2088	0.0100	0.1	0.1242	84.6	84 - 117	0.2059	1.39	20	
Antimony	0.04682	0.00500	0.05	0.000879	91.9	85 - 117	0.04625	1.22	20	
Arsenic	0.04723	0.00500	0.05	0.000811	92.8	84 - 116	0.0471	0.29	20	
Barium	0.6642	0.00500	0.05	0.6627	3.10	86 - 114	0.6633	0.139	20	SO
Beryllium	0.04655	0.00200	0.05	0.000152	92.8	83 - 121	0.04759	2.2	20	
Cadmium	0.04477	0.00200	0.05	0.000361	88.8	87 - 115	0.0462	3.13	20	
Calcium	37.97	0.500	5	36.18	35.7	87 - 118	38.65	1.79	20	SO
Chromium	0.04588	0.00500	0.05	0.002484	86.8	85 - 116	0.04595	0.168	20	
Cobalt	0.04675	0.00500	0.05	0.004591	84.3	86 - 115	0.04679	0.0748	20	S
Iron	5.25	0.200	5	0.7977	89.0	87 - 118	5.258	0.157	20	
Lead	0.0429	0.00500	0.05	0.000285	85.2	88 - 115	0.04267	0.554	20	S
Magnesium	27.72	0.200	5	24.82	57.9	83 - 118	28.04	1.17	20	SO
Manganese	0.3735	0.00500	0.05	0.352	43.1	87 - 115	0.3809	1.95	20	SO
Nickel	0.0544	0.00500	0.05	0.01324	82.3	85 - 117	0.0549	0.913	20	S
Potassium	6.076	0.200	5	1.415	93.2	87 - 115	6.115	0.642	20	
Selenium	0.04871	0.00500	0.05	0.000397	96.6	80 - 120	0.0492	0.991	20	
Silver	0.0378	0.00500	0.05	0.00001	75.6	85 - 116	0.03865	2.23	20	S
Sodium	172.6	0.200	5	179.7	-143	85 - 117	173.5	0.534	20	SO
Thallium	0.04231	0.00200	0.05	0.000241	84.1	82 - 116	0.04185	1.09	20	
Vanadium	0.04488	0.00500	0.05	0.000535	88.7	86 - 115	0.0455	1.37	20	
Zinc	0.1902	0.00500	0.05	0.1566	67.3	83 - 119	0.1926	1.25	20	S

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20111258-01PDS** Units: **mg/L** Analysis Date: **10-Dec-2020 16:16**
Client ID: **LH18/24-SP140_112420** Run ID: **ICPMS04_374333** SeqNo: **5873676** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2358	0.0100	0.1	0.1242	112	80 - 120				
Antimony	0.1026	0.00500	0.1	0.000879	102	80 - 120				
Arsenic	0.1134	0.00500	0.1	0.000811	113	80 - 120				
Barium	0.7832	0.00500	0.1	0.6627	120	80 - 120				SO
Beryllium	0.1109	0.00200	0.1	0.000152	111	80 - 120				
Cadmium	0.1085	0.00200	0.1	0.000361	108	80 - 120				
Chromium	0.1093	0.00500	0.1	0.002484	107	80 - 120				
Cobalt	0.106	0.00500	0.1	0.004591	101	80 - 120				
Iron	11.71	0.200	10	0.7977	109	80 - 120				
Lead	0.1031	0.00500	0.1	0.000285	103	80 - 120				
Magnesium	36.22	0.200	10	24.82	114	80 - 120				
Manganese	0.4695	0.00500	0.1	0.352	118	80 - 120				
Nickel	0.1149	0.00500	0.1	0.01324	102	80 - 120				
Potassium	12.74	0.200	10	1.415	113	80 - 120				
Selenium	0.1157	0.00500	0.1	0.000397	115	80 - 120				
Silver	0.1027	0.00500	0.1	0.00001	103	80 - 120				
Thallium	0.1046	0.00200	0.1	0.000241	104	80 - 120				
Vanadium	0.1091	0.00500	0.1	0.000535	109	80 - 120				
Zinc	0.2654	0.00500	0.1	0.1566	109	80 - 120				

PDS Sample ID: **HS20111258-01PDS** Units: **mg/L** Analysis Date: **11-Dec-2020 12:36**
Client ID: **LH18/24-SP140_112420** Run ID: **ICPMS04_374425** SeqNo: **5876318** PrepDate: **03-Dec-2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	138.5	5.00	100	35.52	103	80 - 120				
Sodium	271.3	2.00	100	173.2	98.1	80 - 120				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20111258-01SD** Units: **mg/L** Analysis Date: **10-Dec-2020 16:10**
Client ID: **LH18/24-SP140_112420** Run ID: **ICPMS04_374333** SeqNo: **5873820** PrepDate: **03-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.1442	0.0500					0.1242	16.2	10	R
Antimony	0.00500	0.0250					0.000879	0	10	U
Arsenic	0.00500	0.0250					0.000811	0	10	U
Barium	0.6426	0.0250					0.6627	3.03	10	
Beryllium	0.00250	0.0100					0	0	10	U
Cadmium	0.00250	0.0100					0.000361	0	10	U
Chromium	0.002636	0.0250					0.002484	0	10	J
Cobalt	0.004895	0.0250					0.004591	0	10	J
Iron	0.7908	1.00					0.7977	0	10	J
Lead	0.00500	0.0250					0	0	10	U
Magnesium	25.5	1.00					24.82	2.72	10	
Manganese	0.3436	0.0250					0.352	2.4	10	
Nickel	0.01424	0.0250					0.01324	0	10	J
Potassium	1.467	1.00					1.415	3.74	10	
Selenium	0.0125	0.0250					0	0	10	U
Silver	0.00250	0.0250					0	0	10	U
Thallium	0.00250	0.0100					0.000241	0	10	U
Vanadium	0.00500	0.0250					0	0	10	U
Zinc	0.1581	0.0250					0.1566	0.964	10	

SD Sample ID: **HS20111258-01SD** Units: **mg/L** Analysis Date: **11-Dec-2020 12:34**
Client ID: **LH18/24-SP140_112420** Run ID: **ICPMS04_374425** SeqNo: **5876317** PrepDate: **03-Dec-2020** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Calcium	38.75	25.0					35.52	9.07	10	
Sodium	187.6	10.0					173.2	8.3	10	

The following samples were analyzed in this batch: HS20111258-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: 160524 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-160524** Units: **mg/L** Analysis Date: **10-Dec-2020 13:50**
Client ID: Run ID: **HG03_374335** SeqNo: **5873307** PrepDate: **09-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-160524** Units: **mg/L** Analysis Date: **10-Dec-2020 13:52**
Client ID: Run ID: **HG03_374335** SeqNo: **5873308** PrepDate: **09-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00493	0.000200	0.005	0	98.6	82 - 119				

MS Sample ID: **HS20111258-01MS** Units: **mg/L** Analysis Date: **10-Dec-2020 13:56**
Client ID: **LH18/24-SP140_112420** Run ID: **HG03_374335** SeqNo: **5873310** PrepDate: **09-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00492	0.000200	0.005	-0.00002200	98.8	82 - 119				

MSD Sample ID: **HS20111258-01MSD** Units: **mg/L** Analysis Date: **10-Dec-2020 13:57**
Client ID: **LH18/24-SP140_112420** Run ID: **HG03_374335** SeqNo: **5873311** PrepDate: **09-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00471	0.000200	0.005	-0.00002200	94.6	82 - 119	0.004920	4.36	20	

The following samples were analyzed in this batch: HS20111258-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: 160215 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160215** Units: **ug/L** Analysis Date: **11-Dec-2020 11:19**
Client ID: Run ID: **SV-6_374543** SeqNo: **5878436** PrepDate: **01-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.07529*	*0*	*0.08*	*0*	*94.1*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07789*	*0*	*0.08*	*0*	*97.4*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07664*	*0*	*0.08*	*0*	*95.8*	*40 - 140*				

LCS Sample ID: **LCS-160215** Units: **ug/L** Analysis Date: **11-Dec-2020 11:37**
Client ID: Run ID: **SV-6_374543** SeqNo: **5878437** PrepDate: **01-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.04996	0.010	0.08	0	62.4	40 - 140				
Surr: 2-Fluorobiphenyl	*0.09695*	*0*	*0.08*	*0*	*121*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.06298*	*0*	*0.08*	*0*	*78.7*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.06635*	*0*	*0.08*	*0*	*82.9*	*40 - 140*				

LCSD Sample ID: **LCSD-160215** Units: **ug/L** Analysis Date: **11-Dec-2020 11:55**
Client ID: Run ID: **SV-6_374543** SeqNo: **5878438** PrepDate: **01-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.04674	0.010	0.08	0	58.4	40 - 140	0.04996	6.65	20	
Surr: 2-Fluorobiphenyl	*0.07215*	*0*	*0.08*	*0*	*90.2*	*40 - 140*	*0.09695*	*29.3*	*20*	R
Surr: 4-Terphenyl-d14	*0.06284*	*0*	*0.08*	*0*	*78.6*	*40 - 140*	*0.06298*	*0.219*	*20*	
Surr: Nitrobenzene-d5	*0.06768*	*0*	*0.08*	*0*	*84.6*	*40 - 140*	*0.06635*	*1.98*	*20*	

The following samples were analyzed in this batch: HS20111258-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MBLK Sample ID: **VBLKW-201205** Units: **ug/L** Analysis Date: **05-Dec-2020 13:20**
Client ID: Run ID: **VOA6_374019** SeqNo: **5866109** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	5.0								U
1,1,1-Trichloroethane	1.0	5.0								U
1,1,2,2-Tetrachloroethane	1.0	5.0								U
1,1,2-Trichloroethane	1.0	5.0								U
1,1-Dichloroethane	1.0	5.0								U
1,1-Dichloroethene	1.0	5.0								U
1,1-Dichloropropene	1.0	5.0								U
1,2,3-Trichlorobenzene	1.0	5.0								U
1,2,3-Trichloropropane	2.0	5.0								U
1,2,4-Trichlorobenzene	1.0	5.0								U
1,2,4-Trimethylbenzene	1.0	5.0								U
1,2-Dibromo-3-chloropropane	1.0	5.0								U
1,2-Dibromoethane	1.0	5.0								U
1,2-Dichlorobenzene	1.0	5.0								U
1,2-Dichloroethane	1.0	5.0								U
1,2-Dichloropropane	2.0	5.0								U
1,3,5-Trimethylbenzene	1.0	5.0								U
1,3-Dichlorobenzene	1.0	5.0								U
1,3-Dichloropropane	1.0	5.0								U
1,4-Dichlorobenzene	1.0	5.0								U
2,2-Dichloropropane	1.0	5.0								U
2-Butanone	4.0	10								U
2-Chlorotoluene	1.0	5.0								U
2-Hexanone	4.0	10								U
4-Chlorotoluene	1.0	5.0								U
4-Isopropyltoluene	1.0	5.0								U
4-Methyl-2-pentanone	2.0	10								U
Acetone	5.0	10								U
Benzene	1.0	5.0								U
Bromobenzene	1.0	5.0								U
Bromochloromethane	1.0	5.0								U
Bromodichloromethane	1.0	5.0								U
Bromoform	1.0	5.0								U
Bromomethane	1.0	5.0								U

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MBLK Sample ID: **VBLKW-201205** Units: **ug/L** Analysis Date: **05-Dec-2020 13:20**
Client ID: Run ID: **VOA6_374019** SeqNo: **5866109** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	2.0	10								U
Carbon tetrachloride	1.0	5.0								U
Chlorobenzene	1.0	5.0								U
Chloroethane	1.0	5.0								U
Chloroform	1.0	5.0								U
Chloromethane	1.0	5.0								U
cis-1,2-Dichloroethene	1.0	5.0								U
cis-1,3-Dichloropropene	1.0	5.0								U
Dibromochloromethane	1.0	5.0								U
Dibromomethane	1.0	5.0								U
Dichlorodifluoromethane	1.0	5.0								U
Ethylbenzene	1.0	5.0								U
Hexachlorobutadiene	2.0	5.0								U
Isopropylbenzene	1.0	5.0								U
m,p-Xylene	1.0	10								U
Methylene chloride	2.0	10								U
Naphthalene	2.0	5.0								U
n-Butylbenzene	2.0	5.0								U
n-Propylbenzene	1.0	5.0								U
o-Xylene	1.0	5.0								U
sec-Butylbenzene	1.0	5.0								U
Styrene	1.0	5.0								U
tert-Butylbenzene	1.0	5.0								U
Tetrachloroethene	1.0	5.0								U
Toluene	1.0	5.0								U
trans-1,2-Dichloroethene	1.0	5.0								U
trans-1,3-Dichloropropene	1.0	5.0								U
Trichloroethene	1.0	5.0								U
Trichlorofluoromethane	1.0	5.0								U
Vinyl chloride	1.0	2.0								U
Surr: 1,2-Dichloroethane-d4	*45.86*	*0*	*50*	*0*	*91.7*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*47.81*	*0*	*50*	*0*	*95.6*	*82 - 115*				
Surr: Dibromofluoromethane	*44.9*	*0*	*50*	*0*	*89.8*	*73 - 126*				
Surr: Toluene-d8	*52.27*	*0*	*50*	*0*	*105*	*81 - 120*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

LCS Sample ID: **VLCSW-201205** Units: **ug/L** Analysis Date: **05-Dec-2020 12:38**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865300** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.34	1.0	20	0	96.7	78 - 124				
1,1,1-Trichloroethane	19.2	1.0	20	0	96.0	74 - 131				
1,1,2,2-Tetrachloroethane	18.82	1.0	20	0	94.1	71 - 121				
1,1,2-Trichloroethane	19.94	1.0	20	0	99.7	80 - 119				
1,1-Dichloroethane	20.13	1.0	20	0	101	77 - 125				
1,1-Dichloroethene	18.29	1.0	20	0	91.4	71 - 131				
1,1-Dichloropropene	19.14	1.0	20	0	95.7	78 - 125				
1,2,3-Trichlorobenzene	21.14	1.0	20	0	106	69 - 129				
1,2,3-Trichloropropane	19.25	1.0	20	0	96.2	73 - 122				
1,2,4-Trichlorobenzene	19.62	1.0	20	0	98.1	69 - 130				
1,2,4-Trimethylbenzene	17.95	1.0	20	0	89.8	76 - 124				
1,2-Dibromo-3-chloropropane	19.8	1.0	20	0	99.0	62 - 128				
1,2-Dibromoethane	19.99	1.0	20	0	99.9	77 - 121				
1,2-Dichlorobenzene	17.92	1.0	20	0	89.6	80 - 119				
1,2-Dichloroethane	20.53	1.0	20	0	103	73 - 128				
1,2-Dichloropropane	20.94	1.0	20	0	105	78 - 122				
1,3,5-Trimethylbenzene	16.99	1.0	20	0	84.9	75 - 124				
1,3-Dichlorobenzene	17.81	1.0	20	0	89.1	80 - 119				
1,3-Dichloropropane	20.55	1.0	20	0	103	80 - 119				
1,4-Dichlorobenzene	18.21	1.0	20	0	91.0	79 - 118				
2,2-Dichloropropane	20.07	1.0	20	0	100	60 - 139				
2-Butanone	40.73	2.0	40	0	102	56 - 143				
2-Chlorotoluene	18.32	1.0	20	0	91.6	79 - 122				
2-Hexanone	40.03	2.0	40	0	100	57 - 139				
4-Chlorotoluene	17.77	1.0	20	0	88.9	78 - 122				
4-Isopropyltoluene	16.59	1.0	20	0	83.0	77 - 127				
4-Methyl-2-pentanone	39.32	2.0	40	0	98.3	67 - 130				
Acetone	44.63	2.0	40	0	112	39 - 160				
Benzene	19.85	1.0	20	0	99.3	79 - 120				
Bromobenzene	18.62	1.0	20	0	93.1	80 - 120				
Bromochloromethane	18.65	1.0	20	0	93.2	78 - 123				
Bromodichloromethane	20.74	1.0	20	0	104	79 - 125				
Bromoform	19.35	1.0	20	0	96.7	66 - 130				
Bromomethane	20.52	1.0	20	0	103	53 - 141				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

LCS Sample ID: **VLCSW-201205** Units: **ug/L** Analysis Date: **05-Dec-2020 12:38**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865300** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.45	2.0	40	0	104	64 - 133				
Carbon tetrachloride	18.5	1.0	20	0	92.5	72 - 136				
Chlorobenzene	18.82	1.0	20	0	94.1	82 - 118				
Chloroethane	18.54	1.0	20	0	92.7	60 - 138				
Chloroform	19.79	1.0	20	0	99.0	79 - 124				
Chloromethane	19.36	1.0	20	0	96.8	50 - 139				
cis-1,2-Dichloroethene	19.81	1.0	20	0	99.0	78 - 123				
cis-1,3-Dichloropropene	20.52	1.0	20	0	103	75 - 124				
Dibromochloromethane	19.62	1.0	20	0	98.1	74 - 126				
Dibromomethane	20.26	1.0	20	0	101	79 - 123				
Dichlorodifluoromethane	19.56	1.0	20	0	97.8	32 - 152				
Ethylbenzene	18.81	1.0	20	0	94.1	79 - 121				
Hexachlorobutadiene	19.21	1.0	20	0	96.0	66 - 134				
Isopropylbenzene	17.08	1.0	20	0	85.4	72 - 131				
m,p-Xylene	35.5	2.0	40	0	88.7	80 - 121				
Methylene chloride	19.54	2.0	20	0	97.7	74 - 124				
Naphthalene	20.24	1.0	20	0	101	61 - 128				
n-Butylbenzene	17.21	1.0	20	0	86.0	75 - 128				
n-Propylbenzene	16.5	1.0	20	0	82.5	76 - 126				
o-Xylene	18.2	1.0	20	0	91.0	78 - 122				
sec-Butylbenzene	15.99	1.0	20	0	80.0	77 - 126				
Styrene	18.86	1.0	20	0	94.3	78 - 123				
tert-Butylbenzene	16.51	1.0	20	0	82.5	78 - 124				
Tetrachloroethene	17.66	1.0	20	0	88.3	74 - 129				
Toluene	18.84	1.0	20	0	94.2	80 - 121				
trans-1,2-Dichloroethene	19.95	1.0	20	0	99.8	75 - 124				
trans-1,3-Dichloropropene	20.39	1.0	20	0	102	73 - 127				
Trichloroethene	18.17	1.0	20	0	90.8	79 - 123				
Trichlorofluoromethane	17.84	1.0	20	0	89.2	65 - 141				
Vinyl chloride	18.55	1.0	20	0	92.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*54.36*	*1.0*	*50*	*0*	*109*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.48*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*50.49*	*1.0*	*50*	*0*	*101*	*80 - 119*				
Surr: Toluene-d8	*50.06*	*1.0*	*50*	*0*	*100*	*89 - 112*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MS Sample ID: **HS20120235-06MS** Units: **ug/L** Analysis Date: **05-Dec-2020 15:47**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865308** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.49	1.0	20	0	92.5	78 - 124				
1,1,1-Trichloroethane	17.51	1.0	20	0	87.5	74 - 131				
1,1,2,2-Tetrachloroethane	19.13	1.0	20	0	95.7	71 - 121				
1,1,2-Trichloroethane	18.77	1.0	20	0	93.9	80 - 119				
1,1-Dichloroethane	16.49	1.0	20	0	82.5	77 - 125				
1,1-Dichloroethene	14.73	1.0	20	0	73.6	71 - 131				
1,1-Dichloropropene	18.98	1.0	20	0	94.9	78 - 125				
1,2,3-Trichlorobenzene	21.44	1.0	20	0	107	69 - 129				
1,2,3-Trichloropropane	19.35	1.0	20	26.56	-36.1	73 - 122				S
1,2,4-Trichlorobenzene	21.74	1.0	20	0	109	69 - 130				
1,2,4-Trimethylbenzene	21.19	1.0	20	0	106	76 - 124				
1,2-Dibromo-3-chloropropane	18.53	1.0	20	0	92.6	62 - 128				
1,2-Dibromoethane	18.6	1.0	20	0	93.0	77 - 121				
1,2-Dichlorobenzene	19.33	1.0	20	0	96.6	80 - 119				
1,2-Dichloroethane	17.21	1.0	20	0	86.0	73 - 128				
1,2-Dichloropropane	17.84	1.0	20	0	89.2	78 - 122				
1,3,5-Trimethylbenzene	20.32	1.0	20	0	102	75 - 124				
1,3-Dichlorobenzene	19.09	1.0	20	0	95.4	80 - 119				
1,3-Dichloropropane	18.94	1.0	20	0	94.7	80 - 119				
1,4-Dichlorobenzene	19.21	1.0	20	0	96.0	79 - 118				
2,2-Dichloropropane	17.16	1.0	20	0	85.8	60 - 139				
2-Butanone	33.5	2.0	40	0	83.8	56 - 143				
2-Chlorotoluene	19.57	1.0	20	0	97.8	79 - 122				
2-Hexanone	39.69	2.0	40	0	99.2	57 - 139				
4-Chlorotoluene	19.61	1.0	20	0	98.1	78 - 122				
4-Isopropyltoluene	21.14	1.0	20	0	106	77 - 127				
4-Methyl-2-pentanone	38.1	2.0	40	0	95.3	67 - 130				
Acetone	27.23	2.0	40	0	68.1	39 - 160				
Benzene	18.06	1.0	20	0	90.3	79 - 120				
Bromobenzene	18.88	1.0	20	0	94.4	80 - 120				
Bromochloromethane	14.83	1.0	20	0	74.1	78 - 123				S
Bromodichloromethane	18.58	1.0	20	0	92.9	79 - 125				
Bromoform	20.08	1.0	20	1.112	94.9	66 - 130				
Bromomethane	14.83	1.0	20	0	74.2	53 - 141				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MS Sample ID: **HS20120235-06MS** Units: **ug/L** Analysis Date: **05-Dec-2020 15:47**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865308** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	31.02	2.0	40	0	77.5	64 - 133				
Carbon tetrachloride	20	1.0	20	0.7654	96.2	72 - 136				
Chlorobenzene	18.23	1.0	20	0	91.2	82 - 118				
Chloroethane	13.86	1.0	20	0	69.3	60 - 138				
Chloroform	16.94	1.0	20	0	84.7	79 - 124				
Chloromethane	13	1.0	20	1.361	58.2	50 - 139				
cis-1,2-Dichloroethene	18.26	1.0	20	0	91.3	78 - 123				
cis-1,3-Dichloropropene	17.03	1.0	20	0	85.2	75 - 124				
Dibromochloromethane	17.3	1.0	20	0	86.5	74 - 126				
Dibromomethane	18.22	1.0	20	0	91.1	79 - 123				
Dichlorodifluoromethane	10.43	1.0	20	0	52.2	32 - 152				
Ethylbenzene	20.36	1.0	20	0	102	79 - 121				
Hexachlorobutadiene	22.15	1.0	20	0	111	66 - 134				
Isopropylbenzene	20.33	1.0	20	0	102	72 - 131				
m,p-Xylene	37.93	2.0	40	0	94.8	80 - 121				
Methylene chloride	15.83	2.0	20	0	79.2	74 - 124				
Naphthalene	18.89	1.0	20	0	94.5	61 - 128				
n-Butylbenzene	22.3	1.0	20	0	111	75 - 128				
n-Propylbenzene	20.09	1.0	20	0	100	76 - 126				
o-Xylene	18.65	1.0	20	0	93.2	78 - 122				
sec-Butylbenzene	21.42	1.0	20	0	107	77 - 126				
Styrene	18.69	1.0	20	0	93.4	78 - 123				
tert-Butylbenzene	20.86	1.0	20	0	104	78 - 124				
Tetrachloroethene	20.35	1.0	20	0	102	74 - 129				
Toluene	18.5	1.0	20	0	92.5	80 - 121				
trans-1,2-Dichloroethene	15.65	1.0	20	0	78.3	75 - 124				
trans-1,3-Dichloropropene	17.77	1.0	20	0	88.8	73 - 127				
Trichloroethene	20.87	1.0	20	0	104	79 - 123				
Trichlorofluoromethane	15.67	1.0	20	0	78.3	65 - 141				
Vinyl chloride	13.16	1.0	20	0	65.8	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.73*	*1.0*	*50*	*0*	*93.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.96*	*1.0*	*50*	*0*	*99.9*	*85 - 114*				
Surr: Dibromofluoromethane	*46.21*	*1.0*	*50*	*0*	*92.4*	*80 - 119*				
Surr: Toluene-d8	*50.97*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MSD Sample ID: **HS20120235-06MSD** Units: **ug/L** Analysis Date: **05-Dec-2020 16:08**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865309** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.06	1.0	20	0	90.3	78 - 124	18.49	2.36	20	
1,1,1-Trichloroethane	16.87	1.0	20	0	84.3	74 - 131	17.51	3.73	20	
1,1,2,2-Tetrachloroethane	19.84	1.0	20	0	99.2	71 - 121	19.13	3.59	20	
1,1,2-Trichloroethane	18.29	1.0	20	0	91.5	80 - 119	18.77	2.58	20	
1,1-Dichloroethane	16.03	1.0	20	0	80.1	77 - 125	16.49	2.87	20	
1,1-Dichloroethene	14.03	1.0	20	0	70.1	71 - 131	14.73	4.89	20	S
1,1-Dichloropropene	17.55	1.0	20	0	87.7	78 - 125	18.98	7.87	20	
1,2,3-Trichlorobenzene	24.43	1.0	20	0	122	69 - 129	21.44	13	20	
1,2,3-Trichloropropane	19.85	1.0	20	26.56	-33.6	73 - 122	19.35	2.56	20	S
1,2,4-Trichlorobenzene	23.34	1.0	20	0	117	69 - 130	21.74	7.1	20	
1,2,4-Trimethylbenzene	21.02	1.0	20	0	105	76 - 124	21.19	0.789	20	
1,2-Dibromo-3-chloropropane	22.99	1.0	20	0	115	62 - 128	18.53	21.5	20	R
1,2-Dibromoethane	18.12	1.0	20	0	90.6	77 - 121	18.6	2.64	20	
1,2-Dichlorobenzene	19.06	1.0	20	0	95.3	80 - 119	19.33	1.4	20	
1,2-Dichloroethane	17.02	1.0	20	0	85.1	73 - 128	17.21	1.07	20	
1,2-Dichloropropane	17.5	1.0	20	0	87.5	78 - 122	17.84	1.93	20	
1,3,5-Trimethylbenzene	19.97	1.0	20	0	99.8	75 - 124	20.32	1.75	20	
1,3-Dichlorobenzene	18.76	1.0	20	0	93.8	80 - 119	19.09	1.75	20	
1,3-Dichloropropane	18.19	1.0	20	0	91.0	80 - 119	18.94	4.04	20	
1,4-Dichlorobenzene	19.07	1.0	20	0	95.4	79 - 118	19.21	0.691	20	
2,2-Dichloropropane	16.54	1.0	20	0	82.7	60 - 139	17.16	3.65	20	
2-Butanone	33.79	2.0	40	0	84.5	56 - 143	33.5	0.852	20	
2-Chlorotoluene	19.13	1.0	20	0	95.7	79 - 122	19.57	2.24	20	
2-Hexanone	39.47	2.0	40	0	98.7	57 - 139	39.69	0.539	20	
4-Chlorotoluene	19.4	1.0	20	0	97.0	78 - 122	19.61	1.08	20	
4-Isopropyltoluene	21.2	1.0	20	0	106	77 - 127	21.14	0.281	20	
4-Methyl-2-pentanone	37.63	2.0	40	0	94.1	67 - 130	38.1	1.25	20	
Acetone	28.07	2.0	40	0	70.2	39 - 160	27.23	3.04	20	
Benzene	17.09	1.0	20	0	85.5	79 - 120	18.06	5.54	20	
Bromobenzene	18.85	1.0	20	0	94.3	80 - 120	18.88	0.15	20	
Bromochloromethane	15.21	1.0	20	0	76.1	78 - 123	14.83	2.55	20	S
Bromodichloromethane	18.43	1.0	20	0	92.1	79 - 125	18.58	0.823	20	
Bromoform	19.25	1.0	20	1.112	90.7	66 - 130	20.08	4.26	20	
Bromomethane	15	1.0	20	0	75.0	53 - 141	14.83	1.12	20	

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MSD Sample ID: **HS20120235-06MSD** Units: **ug/L** Analysis Date: **05-Dec-2020 16:08**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865309** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	30.21	2.0	40	0	75.5	64 - 133	31.02	2.63	20	
Carbon tetrachloride	18.89	1.0	20	0.7654	90.6	72 - 136	20	5.7	20	
Chlorobenzene	17.53	1.0	20	0	87.7	82 - 118	18.23	3.94	20	
Chloroethane	12.38	1.0	20	0	61.9	60 - 138	13.86	11.3	20	
Chloroform	16.17	1.0	20	0	80.8	79 - 124	16.94	4.68	20	
Chloromethane	11.94	1.0	20	1.361	52.9	50 - 139	13	8.45	20	
cis-1,2-Dichloroethene	16.43	1.0	20	0	82.2	78 - 123	18.26	10.6	20	
cis-1,3-Dichloropropene	16.52	1.0	20	0	82.6	75 - 124	17.03	3.04	20	
Dibromochloromethane	17.01	1.0	20	0	85.1	74 - 126	17.3	1.69	20	
Dibromomethane	17.74	1.0	20	0	88.7	79 - 123	18.22	2.66	20	
Dichlorodifluoromethane	10.21	1.0	20	0	51.0	32 - 152	10.43	2.15	20	
Ethylbenzene	19.25	1.0	20	0	96.2	79 - 121	20.36	5.62	20	
Hexachlorobutadiene	23.26	1.0	20	0	116	66 - 134	22.15	4.9	20	
Isopropylbenzene	19.18	1.0	20	0	95.9	72 - 131	20.33	5.81	20	
m,p-Xylene	35.55	2.0	40	0	88.9	80 - 121	37.93	6.47	20	
Methylene chloride	15.04	2.0	20	0	75.2	74 - 124	15.83	5.17	20	
Naphthalene	22.99	1.0	20	0	115	61 - 128	18.89	19.6	20	
n-Butylbenzene	22.38	1.0	20	0	112	75 - 128	22.3	0.387	20	
n-Propylbenzene	19.45	1.0	20	0	97.2	76 - 126	20.09	3.26	20	
o-Xylene	17.84	1.0	20	0	89.2	78 - 122	18.65	4.42	20	
sec-Butylbenzene	20.85	1.0	20	0	104	77 - 126	21.42	2.67	20	
Styrene	18.02	1.0	20	0	90.1	78 - 123	18.69	3.66	20	
tert-Butylbenzene	20.19	1.0	20	0	101	78 - 124	20.86	3.28	20	
Tetrachloroethene	19.15	1.0	20	0	95.8	74 - 129	20.35	6.07	20	
Toluene	18.05	1.0	20	0	90.3	80 - 121	18.5	2.44	20	
trans-1,2-Dichloroethene	15.06	1.0	20	0	75.3	75 - 124	15.65	3.85	20	
trans-1,3-Dichloropropene	17.1	1.0	20	0	85.5	73 - 127	17.77	3.83	20	
Trichloroethene	17.5	1.0	20	0	87.5	79 - 123	20.87	17.6	20	
Trichlorofluoromethane	15.2	1.0	20	0	76.0	65 - 141	15.67	3.01	20	
Vinyl chloride	12.32	1.0	20	0	61.6	58 - 137	13.16	6.52	20	
Surr: 1,2-Dichloroethane-d4	*47.17*	*1.0*	*50*	*0*	*94.3*	*81 - 118*	*46.73*	*0.953*	*20*	
Surr: 4-Bromofluorobenzene	*50.29*	*1.0*	*50*	*0*	*101*	*85 - 114*	*49.96*	*0.658*	*20*	
Surr: Dibromofluoromethane	*44.86*	*1.0*	*50*	*0*	*89.7*	*80 - 119*	*46.21*	*2.97*	*20*	
Surr: Toluene-d8	*50.75*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.97*	*0.427*	*20*	

ALS Houston, US Date: 15-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder:	HS20111258

QC BATCH REPORT

Batch ID:	**R374019 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES - SW8260C**

The following samples were analyzed in this batch:	HS20111258-01	HS20111258-02

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201207** Units: **ug/L** Analysis Date: **07-Dec-2020 10:52**
Client ID: Run ID: **VOA6_374144** SeqNo: **5868027** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	0.50	1.0								U
Methylene chloride	1.0	2.0								U
Trichloroethene	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*46.32*	*1.0*	*50*	*0*	*92.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.49*	*1.0*	*50*	*0*	*99.0*	*85 - 114*				
Surr: Dibromofluoromethane	*45.7*	*1.0*	*50*	*0*	*91.4*	*80 - 119*				
Surr: Toluene-d8	*52.98*	*1.0*	*50*	*0*	*106*	*89 - 112*				

LCS Sample ID: **VLCSW-201207** Units: **ug/L** Analysis Date: **07-Dec-2020 10:09**
Client ID: Run ID: **VOA6_374144** SeqNo: **5868026** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	18.31	1.0	20	0	91.5	78 - 123				
Methylene chloride	18	2.0	20	0	90.0	74 - 124				
Trichloroethene	17.89	1.0	20	0	89.4	79 - 123				
Surr: 1,2-Dichloroethane-d4	*50.58*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.47*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*48.71*	*1.0*	*50*	*0*	*97.4*	*80 - 119*				
Surr: Toluene-d8	*49.85*	*1.0*	*50*	*0*	*99.7*	*89 - 112*				

MS Sample ID: **HS20120240-10MS** Units: **ug/L** Analysis Date: **07-Dec-2020 17:44**
Client ID: Run ID: **VOA6_374144** SeqNo: **5868062** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	13.81	1.0	20	0	69.1	78 - 123				S
Methylene chloride	13.31	2.0	20	0	66.6	74 - 124				S
Trichloroethene	20.49	1.0	20	8.277	61.0	79 - 123				S
Surr: 1,2-Dichloroethane-d4	*46.33*	*1.0*	*50*	*0*	*92.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.88*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*45.33*	*1.0*	*50*	*0*	*90.7*	*80 - 119*				
Surr: Toluene-d8	*51.7*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374144 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120240-10MSD** Units: **ug/L** Analysis Date: **07-Dec-2020 18:05**
Client ID: Run ID: **VOA6_374144** SeqNo: **5868063** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	13.81	1.0	20	0	69.0	78 - 123	13.81	0.0395	20	S
Methylene chloride	13.46	2.0	20	0	67.3	74 - 124	13.31	1.12	20	S
Trichloroethene	19.71	1.0	20	8.277	57.2	79 - 123	20.49	3.85	20	S
Surr: 1,2-Dichloroethane-d4	*45.74*	*1.0*	*50*	*0*	*91.5*	*81 - 118*	*46.33*	*1.27*	*20*	
Surr: 4-Bromofluorobenzene	*50.22*	*1.0*	*50*	*0*	*100*	*85 - 114*	*50.88*	*1.31*	*20*	
Surr: Dibromofluoromethane	*44.6*	*1.0*	*50*	*0*	*89.2*	*80 - 119*	*45.33*	*1.64*	*20*	
Surr: Toluene-d8	*50.3*	*1.0*	*50*	*0*	*101*	*89 - 112*	*51.7*	*2.75*	*20*	

The following samples were analyzed in this batch: HS20111258-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374243 (0) **Instrument: WetChem_HS** **Method: CHEMICAL OXYGEN DEMAND BY E410.4**

MBLK Sample ID: **MBLK-R374243** Units: **mg/L** Analysis Date: **09-Dec-2020 10:30**
Client ID: Run ID: **WetChem_HS_374243** SeqNo: **5870382** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	15.0	15.0								U

LCS Sample ID: **LCS-R374243** Units: **mg/L** Analysis Date: **09-Dec-2020 10:30**
Client ID: Run ID: **WetChem_HS_374243** SeqNo: **5870381** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	98	15.0	100	0	98.0	85 - 115				

MS Sample ID: **HS20120271-01MS** Units: **mg/L** Analysis Date: **09-Dec-2020 10:30**
Client ID: Run ID: **WetChem_HS_374243** SeqNo: **5870384** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	53	15.0	50	6	94.0	80 - 120				

MSD Sample ID: **HS20120271-01MSD** Units: **mg/L** Analysis Date: **09-Dec-2020 10:30**
Client ID: Run ID: **WetChem_HS_374243** SeqNo: **5870383** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	55	15.0	50	6	98.0	80 - 120	53	3.7	20	

The following samples were analyzed in this batch: HS20111258-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374453 (0) **Instrument: ICS2100** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **11-Dec-2020 10:00**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875960** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **11-Dec-2020 11:47**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875962** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.49	0.500	20	0	97.4	80 - 120				
Sulfate	19.41	0.500	20	0	97.0	80 - 120				

MS Sample ID: **HS20120243-01MS** Units: **mg/L** Analysis Date: **11-Dec-2020 08:11**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875954** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	835.5	10.0	200	678	78.8	80 - 120				S
Sulfate	222.2	10.0	200	29.25	96.5	80 - 120				

MSD Sample ID: **HS20120243-01MSD** Units: **mg/L** Analysis Date: **11-Dec-2020 08:29**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875955** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	833.8	10.0	200	678	77.9	80 - 120	835.5	0.201	20	S
Sulfate	221.4	10.0	200	29.25	96.1	80 - 120	222.2	0.344	20	

The following samples were analyzed in this batch: HS20111258-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: HS20111258

QC BATCH REPORT

Batch ID: R374473 (0) **Instrument: Balance1** **Method: OIL & GREASE (HEM) BY E1664A**

MBLK Sample ID: **WBLKW-121120** Units: **mg/L** Analysis Date: **11-Dec-2020 14:20**
Client ID: Run ID: **Balance1_374473** SeqNo: **5876673** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	2.00	2.00								U

LCS Sample ID: **WLCSW-121120** Units: **mg/L** Analysis Date: **11-Dec-2020 14:20**
Client ID: Run ID: **Balance1_374473** SeqNo: **5876675** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	37.5	2.00	40	0	93.8	78 - 114				

LCSD Sample ID: **WLCSDW-121120** Units: **mg/L** Analysis Date: **11-Dec-2020 14:20**
Client ID: Run ID: **Balance1_374473** SeqNo: **5876674** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	39.4	2.00	40	0	98.5	78 - 114	37.5	4.94	18	

MS Sample ID: **HS20120088-01MS** Units: **mg/L** Analysis Date: **11-Dec-2020 14:20**
Client ID: Run ID: **Balance1_374473** SeqNo: **5876658** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	37.5	2.00	40	-0.4348	94.8	78 - 114				

The following samples were analyzed in this batch: HS20111258-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
WorkOrder: **HS20111258**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Influent Samples
Work Order: HS20111258

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20111258-01	LH18/24-SP140_112420	Login	11/25/2020 11:59:25 AM	PMG	Sub
HS20111258-01	LH18/24-SP140_112420	Login	11/25/2020 11:59:25 AM	PMG	Disposed
HS20111258-01	LH18/24-SP140_112420	Login	11/25/2020 11:59:25 AM	PMG	Disposed
HS20111258-01	LH18/24-SP140_112420	Login	11/25/2020 11:59:25 AM	PMG	Disposed
HS20111258-01	LH18/24-SP140_112420	Login	11/25/2020 11:59:25 AM	PMG	Disposed
HS20111258-01	LH18/24-SP140_112420	Login	11/25/2020 11:59:25 AM	PMG	Disposed
HS20111258-01	LH18/24-SP140_112420	Login	11/25/2020 11:59:25 AM	PMG	VOA230
HS20111258-02	Trip Blank	Login	11/25/2020 11:59:25 AM	PMG	VOA230

ALS Houston, US Date: 15-Dec-20

Sample Receipt Checklist

Work Order ID: HS20111258 **Date/Time Received:** **25-Nov-2020 10:45**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	25-Nov-2020 12:04	**Reviewed by:**	/S/ RJ Modashia	29-Nov-2020 11:34
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.2C U/c	IR31
Cooler(s)/Kit(s):	46379	
Date/Time sample(s) sent to storage:	11/25/2020 12:20	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, Tx. 77099 ATTN: RJ Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT QUARTERLY INFLUENT SAMPLES

Prepared By:
Scott Beesinger

P. O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: ROD Volatiles	Total Metals	Oil & Grease	Chemical Oxygen Demand	Chloride & Sulfate	1, 4 - DIOXANE	Perchlorate				Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP140_112420	Water	11/24/20 / 14:00		4	3		1								HCL	
LH18/24-SP140_112420	Water	11/24/20 / 14:00		1		1									HNO3	
LH18/24-SP140_112420	Water	11/24/20 / 14:00		2					1	1					NONE	
LH18/24-SP140_112420	Water	11/24/20 / 14:00		1				1							H2SO4	
LH18/24-SP140_112420	Water	11/24/20 / 14:00		1							1				NONE	
Trip Blank	Water	11/24/20		2	2										HCL	

Additional Remarks: **STANDARD TURN AROUND TIME**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/24/20	14:30	JM Jr	11/25/2020	10:45						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time

Remarks:
463TP etc. 1.2 - 1.3 Cl Fm

HS20111258
Bhate Environmental Associates, Inc.
Groundwater Treatment Plant Quarterly Influent Sample

(Word) S:\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46379

CUSTODY SEAL

Date: 11/24/20 Time: 1430
Name: South Bass 6092
Company: Pathfinder

Seal Broken By: GM
Date: 11/25/20

46379

Must Deliver Next Business Day
Time and Tempature Sensitive!

46379

ORIGIN ID:SGRA (303) 587-2450
SCOTT BELSINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 25NOV20
ACTWGT: 1.00 LB MAN
CAD: 3001307/CAFE3201
DIMS: 19x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530- 5656
REF: ADDITIONAL BOTTLES - BO 73689 - RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1496

WED - 25 NOV AA
PRIORITY OVERNIGHT

XH SGRA

77099
TX-US
IAH

ID: 162785 7486w2070 CCCA 5SDGS/BA09/85JV

December 15, 2020 Service Request No:E2001170

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20111258

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 25, 2020
For your reference, these analyses have been assigned our service request number **E2001170.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001170
Project:	HS20111258	**Date Received:**	11/25/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/25/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000652: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001170
Project: HS20111258

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001170-001	LH18/24-SP140_112420	11/24/2020	1400

Service Request Summary

Folder #: **E2001170**
Client Name: ALS Environmental - US
Project Name: HS20111258
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/25/20
Internal Due Date: 12/11/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20111258
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 3B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001170-001	LH18/24-SP140_112420	Water	11/24/20 1400	**IV**

Service Request Summary

Folder #:	**E2001170**
Client Name:	ALS Environmental - US
Project Name:	HS20111258
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	11/25/20
Internal Due Date:	12/11/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20111258
EDD:	No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved

Location: EHRMS-WIC 3B

Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Colorado** **COC ID:** **15223**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20111258
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20111258-01**	**LH18/24-SP140_112420**	**Water**	**24 Nov 2020 14:00**
	SUB_Perch-6850			11 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mangum Date/Time: 11/25/20

Received By: [illegible] Date/Time: [illegible] 1200

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ACS-H

Thermometer ID IR31

Date/Time Received: 11/25/20 Initials: CH Date/Time Logged in: 11/25/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ Courier (ACS) ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?
Were they intact? ○ Yes ○ No ✓ N/A
Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		11/25/20	1200	CH	3.3	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371244 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/9/20 13:32

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001169-001	LH18/24-SP650_112420_AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001170-001	LH18/24-SP140_112420	.01	6850/ClO4 DOD			Water	10mL	
3	E2001171-001	LH18/24-SP650_112420_AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2001182-001	HBW7_120320	.01	6850/ClO4 DOD			Water	10mL	
5	E2001182-002	HBW10_120320	.01	6850/ClO4 DOD			Water	10mL	
6	E2001182-003	HBW1_120320	.01	6850/ClO4 DOD			Water	10mL	
7	E2001182-004	HBW1_120320_a	.01	6850/ClO4 DOD			Water	10mL	
8	E2001182-005	GPW1_120320	.01	6850/ClO4 DOD			Water	10mL	
9	E2001182-006	GPW3_120320	.01	6850/ClO4 DOD			Water	10mL	
10	E2001186-001	LH18/24-SP650_120220-AIX	.01	6850/ClO4 DOD			Water	10mL	
11	E2001186-002	LH18/24-SP650_120220-Between	.01	6850/ClO4 DOD			Water	10mL	
12	EQ2000652-01	MB		6850/ClO4 DOD			Liquid	10mL	
13	EQ2000652-02	LCS		6850/ClO4 DOD			Liquid	10mL	
14	EQ2000652-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000652-01	1.00µL	EQ2000652-02	1.00µL	EQ2000652-03	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001169-001	100.00µL	E2001170-001	100.00µL	E2001171-001	100.00µL	E2001182-001	100.00µL	E2001182-002	100.00µL	E2001182-003	100.00µL
E2001182-004	100.00µL	E2001182-005	100.00µL	E2001182-006	100.00µL	E2001186-001	100.00µL	E2001186-002	100.00µL	EQ2000652-01	100.00µL
EQ2000652-02	100.00µL	EQ2000652-03	100.00µL								

Preparation Steps

Step: Preparation
Started: 12/9/20 13:32
Finished: 12/9/20 15:00
By: GRIVERA
Comments

Comments:

Preparation Information Benchsheet

Prep Run#: 371244
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 12/9/20 13:32

Reviewed By: GR Date: 12/9/20

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001170
Project:	HS20111258	**Date Collected:**	11/24/20 1400
Sample Matrix:	Water	**Date Received:**	11/25/20
Sample Name:	LH18/24-SP140_112420	**Units:**	µg/L
Lab Code:	E2001170-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**8900**		50.0	25.0	12.5	500	12/ 9/20	12/13/20 20:41	371244	706933	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001170
Project:	HS20111258	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000652-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:09	371244	706933	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001170
Project:	HS20111258	**Date Analyzed:**	12/13/20
Sample Matrix:	Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	371244

	Lab Control Sample EQ2000652-02			Duplicate Lab Control Sample EQ2000652-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.111	0.100	111	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001170
Project:	HS20111258	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000652-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:17	371244	706933	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001170
Project:	HS20111258	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000652-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:25	371244	706933	

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December 15, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20111260**

Laboratory Results for: **Groundwater Treatment Plant Quarterly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Nov 25, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
Work Order: HS20111260

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20111260-01	LH18/24-SP650_112420	Water		24-Nov-2020 14:00	25-Nov-2020 10:45	☐
HS20111260-02	LH18/24-SP650_112420_AIX	Water		24-Nov-2020 14:00	25-Nov-2020 10:45	☐
HS20111260-03	Trip Blank	Water		24-Nov-2020 14:00	25-Nov-2020 10:45	☐

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Groundwater Treatment Plant Quarterly Effluent Samples
Work Order: HS20111260

Work Order Comments

• The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160215

Sample ID: LH18/24-SP650_112420 (HS20111260-01)

• The GCMS semi-volatile extract of this sample was run at a dilution due to a high level of matrix interference.

• The surrogate recoveries could not be determined due to dilution below the calibration range.

Sample ID: LCSD-160215

• The RPD between the LCS and LCSD was outside of the control limit.

GCMS Volatiles by Method SW8260

Batch ID: R374019

Sample ID: HS20120235-06MS

• MS and MSD are for an unrelated sample

Metals by Method SW7470

Batch ID: 160524

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 160306

Sample ID: HS20111258-01MS

• MS/MSD and DUPs are for an unrelated sample

WetChemistry by Method E1664A

Batch ID: R374473

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9056

Batch ID: R374453

Sample ID: HS20120243-01MS

• MS and MSD are for an unrelated sample (Chloride)

WetChemistry by Method E410.4

Batch ID: R374243

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Effluent Samples WorkOrder:HS20111260
Sample ID: LH18/24-SP650_112420 Lab ID:HS20111260-01
Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: QX
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,1-Dichloropropene	**5.4**		**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 17:12
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 17:12
1,2,3-Trichloropropane	**27**		**0.50**	**1.0**	**1.0**	**ug/L**	1	05-Dec-2020 17:12
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	05-Dec-2020 17:12
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	05-Dec-2020 17:12
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 17:12
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 17:12
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
2-Butanone	**110**		**0.50**	**1.0**	**2.0**	**ug/L**	1	05-Dec-2020 17:12
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
2-Hexanone	**9.7**		**1.0**	**2.0**	**2.0**	**ug/L**	1	05-Dec-2020 17:12
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 17:12
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
4-Methyl-2-pentanone	**1.1**	J	**0.70**	**2.0**	**2.0**	**ug/L**	1	05-Dec-2020 17:12
Acetone	**140**		**0.40**	**1.0**	**2.0**	**ug/L**	1	05-Dec-2020 17:12
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 17:12
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Bromoform	**0.96**	J	**0.40**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 17:12
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	05-Dec-2020 17:12
Carbon tetrachloride	**7.8**		**0.50**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 17:12
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Chloroethane	**1.3**		**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 17:12
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Effluent Samples WorkOrder:HS20111260
Sample ID: LH18/24-SP650_112420 Lab ID:HS20111260-01
Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: QX
Chloromethane	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 17:12
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	05-Dec-2020 17:12
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	05-Dec-2020 17:12
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	05-Dec-2020 17:12
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 17:12
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 17:12
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 17:12
Surr: 1,2-Dichloroethane-d4	*91.3*			**0**	*81-118*	*%REC*	*1*	*05-Dec-2020 17:12*
Surr: 4-Bromofluorobenzene	*95.0*			**0**	*85-114*	*%REC*	*1*	*05-Dec-2020 17:12*
Surr: Dibromofluoromethane	*88.3*			**0**	*80-119*	*%REC*	*1*	*05-Dec-2020 17:12*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*05-Dec-2020 17:12*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 01-Dec-2020		Analyst: ACN
1,4-Dioxane	**5.0**		**1.0**	**1.0**	**1.0**	**ug/L**	100	11-Dec-2020 14:20
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*11-Dec-2020 14:20*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*11-Dec-2020 14:20*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*11-Dec-2020 14:20*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Effluent Samples WorkOrder:HS20111260
Sample ID: LH18/24-SP650_112420 Lab ID:HS20111260-01
Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 03-Dec-2020		Analyst: JHD
Aluminum	**0.0394**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	10-Dec-2020 16:34
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	10-Dec-2020 16:34
Arsenic	**0.000419**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2020 16:34
Barium	**0.220**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	10-Dec-2020 16:34
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	10-Dec-2020 16:34
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	10-Dec-2020 16:34
Calcium	**11.0**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	10-Dec-2020 16:34
Chromium	**0.00665**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2020 16:34
Cobalt	**0.00152**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	10-Dec-2020 16:34
Iron	**0.434**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	10-Dec-2020 16:34
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	10-Dec-2020 16:34
Magnesium	**16.3**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	10-Dec-2020 16:34
Manganese	**0.131**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	10-Dec-2020 16:34
Nickel	**0.00353**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	10-Dec-2020 16:34
Potassium	**1.89**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	10-Dec-2020 16:34
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	10-Dec-2020 16:34
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	10-Dec-2020 16:34
Sodium	**4.17**		**0.140**	**0.500**	**2.00**	**mg/L**	10	10-Dec-2020 16:50
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	10-Dec-2020 16:34
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	10-Dec-2020 16:34
Zinc	**0.0501**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	10-Dec-2020 16:34
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 09-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	10-Dec-2020 14:11
OIL & GREASE (HEM) BY E1664A		**Method:E1664A**						Analyst: KAH
Oil and Grease	2.00	U	0.610	2.00	2.00	mg/L	1	11-Dec-2020 14:20
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**						Analyst: TH
Chemical Oxygen Demand	**14.0**	J	**5.00**	**15.0**	**15.0**	**mg/L**	1	09-Dec-2020 10:30
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**653**		**4.00**	**10.0**	**10.0**	**mg/L**	20	11-Dec-2020 06:40
Sulfate	**27.9**		**4.00**	**10.0**	**10.0**	**mg/L**	20	11-Dec-2020 06:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Groundwater Treatment Plant Quarterly Effluent Samples WorkOrder:HS20111260

Sample ID: LH18/24-SP650_112420_AIX Lab ID:HS20111260-02

Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	15-Dec-2020 18:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Groundwater Treatment Plant Quarterly Effluent Samples WorkOrder:HS20111260
Sample ID: Trip Blank Lab ID:HS20111260-03
Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: QX
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,1-Dichloropropene	**5.7**		**0.30**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 14:02
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 14:02
1,2,3-Trichloropropane	**27**		**0.50**	**1.0**	**1.0**	**ug/L**	1	05-Dec-2020 14:02
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	05-Dec-2020 14:02
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	05-Dec-2020 14:02
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 14:02
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 14:02
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	05-Dec-2020 14:02
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	05-Dec-2020 14:02
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 14:02
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
4-Methyl-2-pentanone	**1.1**	J	**0.70**	**2.0**	**2.0**	**ug/L**	1	05-Dec-2020 14:02
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	05-Dec-2020 14:02
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 14:02
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Bromoform	**1.1**		**0.40**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 14:02
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	05-Dec-2020 14:02
Carbon tetrachloride	**7.6**		**0.50**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 14:02
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Groundwater Treatment Plant Quarterly Effluent Samples WorkOrder:HS20111260

Sample ID: Trip Blank Lab ID:HS20111260-03

Collection Date: 24-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: QX
Chloromethane	**1.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	05-Dec-2020 14:02
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	05-Dec-2020 14:02
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	05-Dec-2020 14:02
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	05-Dec-2020 14:02
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	05-Dec-2020 14:02
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	05-Dec-2020 14:02
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	05-Dec-2020 14:02
Surr: 1,2-Dichloroethane-d4	*92.5*			**0**	*81-118*	*%REC*	*1*	*05-Dec-2020 14:02*
Surr: 4-Bromofluorobenzene	*95.3*			**0**	*85-114*	*%REC*	*1*	*05-Dec-2020 14:02*
Surr: Dibromofluoromethane	*89.9*			**0**	*80-119*	*%REC*	*1*	*05-Dec-2020 14:02*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*05-Dec-2020 14:02*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

Batch ID: 160215 **Start Date:** 01 Dec 2020 07:59 **End Date:** 01 Dec 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20111260-01	1	1000 (mL)	1 (mL)	0.001

Batch ID: 160306 **Start Date:** 03 Dec 2020 11:00 **End Date:** 03 Dec 2020 15:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20111260-01		10 (mL)	10 (mL)	1

Batch ID: 160524 **Start Date:** 10 Dec 2020 08:00 **End Date:** 10 Dec 2020 10:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20111260-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160215 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20111260-01	LH18/24-SP650_112420	24 Nov 2020 14:00		01 Dec 2020 07:59	11 Dec 2020 14:20	100
Batch ID: 160306 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20111260-01	LH18/24-SP650_112420	24 Nov 2020 14:00		03 Dec 2020 15:00	10 Dec 2020 16:50	10
HS20111260-01	LH18/24-SP650_112420	24 Nov 2020 14:00		03 Dec 2020 15:00	10 Dec 2020 16:34	1
Batch ID: 160524 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS20111260-01	LH18/24-SP650_112420	24 Nov 2020 14:00		09 Dec 2020 11:45	10 Dec 2020 14:11	1
Batch ID: R374019 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20111260-01	LH18/24-SP650_112420	24 Nov 2020 14:00			05 Dec 2020 17:12	1
HS20111260-03	Trip Blank	24 Nov 2020 14:00			05 Dec 2020 14:02	1
Batch ID: R374243 (0)	**Test Name :** CHEMICAL OXYGEN DEMAND BY E410.4				**Matrix:** Water	
HS20111260-01	LH18/24-SP650_112420	24 Nov 2020 14:00			09 Dec 2020 10:30	1
Batch ID: R374453 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20111260-01	LH18/24-SP650_112420	24 Nov 2020 14:00			11 Dec 2020 06:40	20
Batch ID: R374473 (0)	**Test Name :** OIL & GREASE (HEM) BY E1664A				**Matrix:** Water	
HS20111260-01	LH18/24-SP650_112420	24 Nov 2020 14:00			11 Dec 2020 14:20	1
Batch ID: R374695 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20111260-02	LH18/24-SP650_112420_AIX	24 Nov 2020 14:00			15 Dec 2020 18:35	1

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160306** Units: **mg/L** Analysis Date: **10-Dec-2020 16:18**
Client ID: Run ID: **ICPMS04_374333** SeqNo: **5873677** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.007427	0.0100								J
Antimony	0.002151	0.00500								J
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.01893	0.200								J
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.1485	0.200								J
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

LCS Sample ID: **LCS-160306** Units: **mg/L** Analysis Date: **11-Dec-2020 12:53**
Client ID: Run ID: **ICPMS04_374425** SeqNo: **5876321** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1072	0.0100	0.1	0	107	84 - 117				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-160306** Units: **mg/L** Analysis Date: **10-Dec-2020 16:06**
Client ID: Run ID: **ICPMS04_374333** SeqNo: **5873671** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05297	0.00500	0.05	0	106	85 - 117				
Arsenic	0.05306	0.00500	0.05	0	106	84 - 116				
Barium	0.05264	0.00500	0.05	0	105	86 - 114				
Beryllium	0.05272	0.00200	0.05	0	105	83 - 121				
Cadmium	0.05341	0.00200	0.05	0	107	87 - 115				
Calcium	5.193	0.500	5	0	104	87 - 118				
Chromium	0.05145	0.00500	0.05	0	103	85 - 116				
Cobalt	0.05081	0.00500	0.05	0	102	86 - 115				
Iron	5.353	0.200	5	0	107	87 - 118				
Lead	0.0506	0.00500	0.05	0	101	88 - 115				
Magnesium	5.712	0.200	5	0	114	83 - 118				
Manganese	0.05285	0.00500	0.05	0	106	87 - 115				
Nickel	0.05231	0.00500	0.05	0	105	85 - 117				
Potassium	5.611	0.200	5	0	112	87 - 115				
Selenium	0.05555	0.00500	0.05	0	111	80 - 120				
Silver	0.04614	0.00500	0.05	0	92.3	85 - 116				
Sodium	5.577	0.200	5	0	112	85 - 117				
Thallium	0.05348	0.00200	0.05	0	107	82 - 116				
Vanadium	0.0511	0.00500	0.05	0	102	86 - 115				
Zinc	0.05613	0.00500	0.05	0	112	83 - 119				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20111258-01MS** Units: **mg/L** Analysis Date: **10-Dec-2020 16:12**
Client ID: Run ID: **ICPMS04_374333** SeqNo: **5873674** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2059	0.0100	0.1	0.1242	81.8	84 - 117				S
Antimony	0.04625	0.00500	0.05	0.000879	90.7	85 - 117				
Arsenic	0.0471	0.00500	0.05	0.000811	92.6	84 - 116				
Barium	0.6633	0.00500	0.05	0.6627	1.25	86 - 114				SO
Beryllium	0.04759	0.00200	0.05	0.000152	94.9	83 - 121				
Cadmium	0.0462	0.00200	0.05	0.000361	91.7	87 - 115				
Calcium	38.65	0.500	5	36.18	49.4	87 - 118				SO
Chromium	0.04595	0.00500	0.05	0.002484	86.9	85 - 116				
Cobalt	0.04679	0.00500	0.05	0.004591	84.4	86 - 115				S
Iron	5.258	0.200	5	0.7977	89.2	87 - 118				
Lead	0.04267	0.00500	0.05	0.000285	84.8	88 - 115				S
Magnesium	28.04	0.200	5	24.82	64.4	83 - 118				SO
Manganese	0.3809	0.00500	0.05	0.352	57.7	87 - 115				SO
Nickel	0.0549	0.00500	0.05	0.01324	83.3	85 - 117				S
Potassium	6.115	0.200	5	1.415	94.0	87 - 115				
Selenium	0.0492	0.00500	0.05	0.000397	97.6	80 - 120				
Silver	0.03865	0.00500	0.05	0.00001	77.3	85 - 116				S
Sodium	173.5	0.200	5	179.7	-125	85 - 117				SO
Thallium	0.04185	0.00200	0.05	0.000241	83.2	82 - 116				
Vanadium	0.0455	0.00500	0.05	0.000535	89.9	86 - 115				
Zinc	0.1926	0.00500	0.05	0.1566	72.1	83 - 119				S

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20111258-01MSD** Units: **mg/L** Analysis Date: **10-Dec-2020 16:14**
Client ID: Run ID: **ICPMS04_374333** SeqNo: **5873675** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2088	0.0100	0.1	0.1242	84.6	84 - 117	0.2059	1.39	20	
Antimony	0.04682	0.00500	0.05	0.000879	91.9	85 - 117	0.04625	1.22	20	
Arsenic	0.04723	0.00500	0.05	0.000811	92.8	84 - 116	0.0471	0.29	20	
Barium	0.6642	0.00500	0.05	0.6627	3.10	86 - 114	0.6633	0.139	20	SO
Beryllium	0.04655	0.00200	0.05	0.000152	92.8	83 - 121	0.04759	2.2	20	
Cadmium	0.04477	0.00200	0.05	0.000361	88.8	87 - 115	0.0462	3.13	20	
Calcium	37.97	0.500	5	36.18	35.7	87 - 118	38.65	1.79	20	SO
Chromium	0.04588	0.00500	0.05	0.002484	86.8	85 - 116	0.04595	0.168	20	
Cobalt	0.04675	0.00500	0.05	0.004591	84.3	86 - 115	0.04679	0.0748	20	S
Iron	5.25	0.200	5	0.7977	89.0	87 - 118	5.258	0.157	20	
Lead	0.0429	0.00500	0.05	0.000285	85.2	88 - 115	0.04267	0.554	20	S
Magnesium	27.72	0.200	5	24.82	57.9	83 - 118	28.04	1.17	20	SO
Manganese	0.3735	0.00500	0.05	0.352	43.1	87 - 115	0.3809	1.95	20	SO
Nickel	0.0544	0.00500	0.05	0.01324	82.3	85 - 117	0.0549	0.913	20	S
Potassium	6.076	0.200	5	1.415	93.2	87 - 115	6.115	0.642	20	
Selenium	0.04871	0.00500	0.05	0.000397	96.6	80 - 120	0.0492	0.991	20	
Silver	0.0378	0.00500	0.05	0.00001	75.6	85 - 116	0.03865	2.23	20	S
Sodium	172.6	0.200	5	179.7	-143	85 - 117	173.5	0.534	20	SO
Thallium	0.04231	0.00200	0.05	0.000241	84.1	82 - 116	0.04185	1.09	20	
Vanadium	0.04488	0.00500	0.05	0.000535	88.7	86 - 115	0.0455	1.37	20	
Zinc	0.1902	0.00500	0.05	0.1566	67.3	83 - 119	0.1926	1.25	20	S

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20111258-01PDS** Units: **mg/L** Analysis Date: **10-Dec-2020 16:16**
Client ID: Run ID: **ICPMS04_374333** SeqNo: **5873676** PrepDate: **03-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2358	0.0100	0.1	0.1242	112	80 - 120				
Antimony	0.1026	0.00500	0.1	0.000879	102	80 - 120				
Arsenic	0.1134	0.00500	0.1	0.000811	113	80 - 120				
Barium	0.7832	0.00500	0.1	0.6627	120	80 - 120				SO
Beryllium	0.1109	0.00200	0.1	0.000152	111	80 - 120				
Cadmium	0.1085	0.00200	0.1	0.000361	108	80 - 120				
Chromium	0.1093	0.00500	0.1	0.002484	107	80 - 120				
Cobalt	0.106	0.00500	0.1	0.004591	101	80 - 120				
Iron	11.71	0.200	10	0.7977	109	80 - 120				
Lead	0.1031	0.00500	0.1	0.000285	103	80 - 120				
Magnesium	36.22	0.200	10	24.82	114	80 - 120				
Manganese	0.4695	0.00500	0.1	0.352	118	80 - 120				
Nickel	0.1149	0.00500	0.1	0.01324	102	80 - 120				
Potassium	12.74	0.200	10	1.415	113	80 - 120				
Selenium	0.1157	0.00500	0.1	0.000397	115	80 - 120				
Silver	0.1027	0.00500	0.1	0.00001	103	80 - 120				
Thallium	0.1046	0.00200	0.1	0.000241	104	80 - 120				
Vanadium	0.1091	0.00500	0.1	0.000535	109	80 - 120				
Zinc	0.2654	0.00500	0.1	0.1566	109	80 - 120				

PDS Sample ID: **HS20111258-01PDS** Units: **mg/L** Analysis Date: **11-Dec-2020 12:36**
Client ID: Run ID: **ICPMS04_374425** SeqNo: **5876318** PrepDate: **03-Dec-2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	138.5	5.00	100	35.52	103	80 - 120				
Sodium	271.3	2.00	100	173.2	98.1	80 - 120				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: 160306 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20111258-01SD** Units: **mg/L** Analysis Date: **10-Dec-2020 16:10**
Client ID: Run ID: **ICPMS04_374333** SeqNo: **5873820** PrepDate: **03-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.1442	0.0500					0.1242	16.2	10	R
Antimony	0.00500	0.0250					0.000879	0	10	U
Arsenic	0.00500	0.0250					0.000811	0	10	U
Barium	0.6426	0.0250					0.6627	3.03	10	
Beryllium	0.00250	0.0100					0	0	10	U
Cadmium	0.00250	0.0100					0.000361	0	10	U
Chromium	0.002636	0.0250					0.002484	0	10	J
Cobalt	0.004895	0.0250					0.004591	0	10	J
Iron	0.7908	1.00					0.7977	0	10	J
Lead	0.00500	0.0250					0	0	10	U
Magnesium	25.5	1.00					24.82	2.72	10	
Manganese	0.3436	0.0250					0.352	2.4	10	
Nickel	0.01424	0.0250					0.01324	0	10	J
Potassium	1.467	1.00					1.415	3.74	10	
Selenium	0.0125	0.0250					0	0	10	U
Silver	0.00250	0.0250					0	0	10	U
Thallium	0.00250	0.0100					0.000241	0	10	U
Vanadium	0.00500	0.0250					0	0	10	U
Zinc	0.1581	0.0250					0.1566	0.964	10	

SD Sample ID: **HS20111258-01SD** Units: **mg/L** Analysis Date: **11-Dec-2020 12:34**
Client ID: Run ID: **ICPMS04_374425** SeqNo: **5876317** PrepDate: **03-Dec-2020** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Calcium	38.75	25.0					35.52	9.07	10	
Sodium	187.6	10.0					173.2	8.3	10	

The following samples were analyzed in this batch: HS20111260-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: 160524 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-160524** Units: **mg/L** Analysis Date: **10-Dec-2020 13:50**
Client ID: Run ID: **HG03_374335** SeqNo: **5873307** PrepDate: **09-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-160524** Units: **mg/L** Analysis Date: **10-Dec-2020 13:52**
Client ID: Run ID: **HG03_374335** SeqNo: **5873308** PrepDate: **09-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00493	0.000200	0.005	0	98.6	82 - 119				

MS Sample ID: **HS20111258-01MS** Units: **mg/L** Analysis Date: **10-Dec-2020 13:56**
Client ID: Run ID: **HG03_374335** SeqNo: **5873310** PrepDate: **09-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00492	0.000200	0.005	-0.00002200	98.8	82 - 119				

MSD Sample ID: **HS20111258-01MSD** Units: **mg/L** Analysis Date: **10-Dec-2020 13:57**
Client ID: Run ID: **HG03_374335** SeqNo: **5873311** PrepDate: **09-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00471	0.000200	0.005	-0.00002200	94.6	82 - 119	0.004920	4.36	20	

The following samples were analyzed in this batch: HS20111260-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: 160215 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160215** Units: **ug/L** Analysis Date: **11-Dec-2020 11:19**
Client ID: Run ID: **SV-6_374543** SeqNo: **5878436** PrepDate: **01-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.07529*	*0*	*0.08*	*0*	*94.1*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07789*	*0*	*0.08*	*0*	*97.4*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07664*	*0*	*0.08*	*0*	*95.8*	*40 - 140*				

LCS Sample ID: **LCS-160215** Units: **ug/L** Analysis Date: **11-Dec-2020 11:37**
Client ID: Run ID: **SV-6_374543** SeqNo: **5878437** PrepDate: **01-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.04996	0.010	0.08	0	62.4	40 - 140				
Surr: 2-Fluorobiphenyl	*0.09695*	*0*	*0.08*	*0*	*121*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.06298*	*0*	*0.08*	*0*	*78.7*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.06635*	*0*	*0.08*	*0*	*82.9*	*40 - 140*				

LCSD Sample ID: **LCSD-160215** Units: **ug/L** Analysis Date: **11-Dec-2020 11:55**
Client ID: Run ID: **SV-6_374543** SeqNo: **5878438** PrepDate: **01-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.04674	0.010	0.08	0	58.4	40 - 140	0.04996	6.65	20	
Surr: 2-Fluorobiphenyl	*0.07215*	*0*	*0.08*	*0*	*90.2*	*40 - 140*	*0.09695*	*29.3*	*20*	R
Surr: 4-Terphenyl-d14	*0.06284*	*0*	*0.08*	*0*	*78.6*	*40 - 140*	*0.06298*	*0.219*	*20*	
Surr: Nitrobenzene-d5	*0.06768*	*0*	*0.08*	*0*	*84.6*	*40 - 140*	*0.06635*	*1.98*	*20*	

The following samples were analyzed in this batch: HS20111260-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MBLK Sample ID: **VBLKW-201205** Units: **ug/L** Analysis Date: **05-Dec-2020 13:20**
Client ID: Run ID: **VOA6_374019** SeqNo: **5866109** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	5.0								U
1,1,1-Trichloroethane	1.0	5.0								U
1,1,2,2-Tetrachloroethane	1.0	5.0								U
1,1,2-Trichloroethane	1.0	5.0								U
1,1-Dichloroethane	1.0	5.0								U
1,1-Dichloroethene	1.0	5.0								U
1,1-Dichloropropene	1.0	5.0								U
1,2,3-Trichlorobenzene	1.0	5.0								U
1,2,3-Trichloropropane	2.0	5.0								U
1,2,4-Trichlorobenzene	1.0	5.0								U
1,2,4-Trimethylbenzene	1.0	5.0								U
1,2-Dibromo-3-chloropropane	1.0	5.0								U
1,2-Dibromoethane	1.0	5.0								U
1,2-Dichlorobenzene	1.0	5.0								U
1,2-Dichloroethane	1.0	5.0								U
1,2-Dichloropropane	2.0	5.0								U
1,3,5-Trimethylbenzene	1.0	5.0								U
1,3-Dichlorobenzene	1.0	5.0								U
1,3-Dichloropropane	1.0	5.0								U
1,4-Dichlorobenzene	1.0	5.0								U
2,2-Dichloropropane	1.0	5.0								U
2-Butanone	4.0	10								U
2-Chlorotoluene	1.0	5.0								U
2-Hexanone	4.0	10								U
4-Chlorotoluene	1.0	5.0								U
4-Isopropyltoluene	1.0	5.0								U
4-Methyl-2-pentanone	2.0	10								U
Acetone	5.0	10								U
Benzene	1.0	5.0								U
Bromobenzene	1.0	5.0								U
Bromochloromethane	1.0	5.0								U
Bromodichloromethane	1.0	5.0								U
Bromoform	1.0	5.0								U
Bromomethane	1.0	5.0								U

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MBLK Sample ID: **VBLKW-201205** Units: **ug/L** Analysis Date: **05-Dec-2020 13:20**
Client ID: Run ID: **VOA6_374019** SeqNo: **5866109** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	2.0	10								U
Carbon tetrachloride	1.0	5.0								U
Chlorobenzene	1.0	5.0								U
Chloroethane	1.0	5.0								U
Chloroform	1.0	5.0								U
Chloromethane	1.0	5.0								U
cis-1,2-Dichloroethene	1.0	5.0								U
cis-1,3-Dichloropropene	1.0	5.0								U
Dibromochloromethane	1.0	5.0								U
Dibromomethane	1.0	5.0								U
Dichlorodifluoromethane	1.0	5.0								U
Ethylbenzene	1.0	5.0								U
Hexachlorobutadiene	2.0	5.0								U
Isopropylbenzene	1.0	5.0								U
m,p-Xylene	1.0	10								U
Methylene chloride	2.0	10								U
Naphthalene	2.0	5.0								U
n-Butylbenzene	2.0	5.0								U
n-Propylbenzene	1.0	5.0								U
o-Xylene	1.0	5.0								U
sec-Butylbenzene	1.0	5.0								U
Styrene	1.0	5.0								U
tert-Butylbenzene	1.0	5.0								U
Tetrachloroethene	1.0	5.0								U
Toluene	1.0	5.0								U
trans-1,2-Dichloroethene	1.0	5.0								U
trans-1,3-Dichloropropene	1.0	5.0								U
Trichloroethene	1.0	5.0								U
Trichlorofluoromethane	1.0	5.0								U
Vinyl chloride	1.0	2.0								U
Surr: 1,2-Dichloroethane-d4	*45.86*	*0*	*50*	*0*	*91.7*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*47.81*	*0*	*50*	*0*	*95.6*	*82 - 115*				
Surr: Dibromofluoromethane	*44.9*	*0*	*50*	*0*	*89.8*	*73 - 126*				
Surr: Toluene-d8	*52.27*	*0*	*50*	*0*	*105*	*81 - 120*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

LCS Sample ID: **VLCSW-201205** Units: **ug/L** Analysis Date: **05-Dec-2020 12:38**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865300** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.34	1.0	20	0	96.7	78 - 124				
1,1,1-Trichloroethane	19.2	1.0	20	0	96.0	74 - 131				
1,1,2,2-Tetrachloroethane	18.82	1.0	20	0	94.1	71 - 121				
1,1,2-Trichloroethane	19.94	1.0	20	0	99.7	80 - 119				
1,1-Dichloroethane	20.13	1.0	20	0	101	77 - 125				
1,1-Dichloroethene	18.29	1.0	20	0	91.4	71 - 131				
1,1-Dichloropropene	19.14	1.0	20	0	95.7	78 - 125				
1,2,3-Trichlorobenzene	21.14	1.0	20	0	106	69 - 129				
1,2,3-Trichloropropane	19.25	1.0	20	0	96.2	73 - 122				
1,2,4-Trichlorobenzene	19.62	1.0	20	0	98.1	69 - 130				
1,2,4-Trimethylbenzene	17.95	1.0	20	0	89.8	76 - 124				
1,2-Dibromo-3-chloropropane	19.8	1.0	20	0	99.0	62 - 128				
1,2-Dibromoethane	19.99	1.0	20	0	99.9	77 - 121				
1,2-Dichlorobenzene	17.92	1.0	20	0	89.6	80 - 119				
1,2-Dichloroethane	20.53	1.0	20	0	103	73 - 128				
1,2-Dichloropropane	20.94	1.0	20	0	105	78 - 122				
1,3,5-Trimethylbenzene	16.99	1.0	20	0	84.9	75 - 124				
1,3-Dichlorobenzene	17.81	1.0	20	0	89.1	80 - 119				
1,3-Dichloropropane	20.55	1.0	20	0	103	80 - 119				
1,4-Dichlorobenzene	18.21	1.0	20	0	91.0	79 - 118				
2,2-Dichloropropane	20.07	1.0	20	0	100	60 - 139				
2-Butanone	40.73	2.0	40	0	102	56 - 143				
2-Chlorotoluene	18.32	1.0	20	0	91.6	79 - 122				
2-Hexanone	40.03	2.0	40	0	100	57 - 139				
4-Chlorotoluene	17.77	1.0	20	0	88.9	78 - 122				
4-Isopropyltoluene	16.59	1.0	20	0	83.0	77 - 127				
4-Methyl-2-pentanone	39.32	2.0	40	0	98.3	67 - 130				
Acetone	44.63	2.0	40	0	112	39 - 160				
Benzene	19.85	1.0	20	0	99.3	79 - 120				
Bromobenzene	18.62	1.0	20	0	93.1	80 - 120				
Bromochloromethane	18.65	1.0	20	0	93.2	78 - 123				
Bromodichloromethane	20.74	1.0	20	0	104	79 - 125				
Bromoform	19.35	1.0	20	0	96.7	66 - 130				
Bromomethane	20.52	1.0	20	0	103	53 - 141				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

LCS Sample ID: **VLCSW-201205** Units: **ug/L** Analysis Date: **05-Dec-2020 12:38**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865300** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.45	2.0	40	0	104	64 - 133				
Carbon tetrachloride	18.5	1.0	20	0	92.5	72 - 136				
Chlorobenzene	18.82	1.0	20	0	94.1	82 - 118				
Chloroethane	18.54	1.0	20	0	92.7	60 - 138				
Chloroform	19.79	1.0	20	0	99.0	79 - 124				
Chloromethane	19.36	1.0	20	0	96.8	50 - 139				
cis-1,2-Dichloroethene	19.81	1.0	20	0	99.0	78 - 123				
cis-1,3-Dichloropropene	20.52	1.0	20	0	103	75 - 124				
Dibromochloromethane	19.62	1.0	20	0	98.1	74 - 126				
Dibromomethane	20.26	1.0	20	0	101	79 - 123				
Dichlorodifluoromethane	19.56	1.0	20	0	97.8	32 - 152				
Ethylbenzene	18.81	1.0	20	0	94.1	79 - 121				
Hexachlorobutadiene	19.21	1.0	20	0	96.0	66 - 134				
Isopropylbenzene	17.08	1.0	20	0	85.4	72 - 131				
m,p-Xylene	35.5	2.0	40	0	88.7	80 - 121				
Methylene chloride	19.54	2.0	20	0	97.7	74 - 124				
Naphthalene	20.24	1.0	20	0	101	61 - 128				
n-Butylbenzene	17.21	1.0	20	0	86.0	75 - 128				
n-Propylbenzene	16.5	1.0	20	0	82.5	76 - 126				
o-Xylene	18.2	1.0	20	0	91.0	78 - 122				
sec-Butylbenzene	15.99	1.0	20	0	80.0	77 - 126				
Styrene	18.86	1.0	20	0	94.3	78 - 123				
tert-Butylbenzene	16.51	1.0	20	0	82.5	78 - 124				
Tetrachloroethene	17.66	1.0	20	0	88.3	74 - 129				
Toluene	18.84	1.0	20	0	94.2	80 - 121				
trans-1,2-Dichloroethene	19.95	1.0	20	0	99.8	75 - 124				
trans-1,3-Dichloropropene	20.39	1.0	20	0	102	73 - 127				
Trichloroethene	18.17	1.0	20	0	90.8	79 - 123				
Trichlorofluoromethane	17.84	1.0	20	0	89.2	65 - 141				
Vinyl chloride	18.55	1.0	20	0	92.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*54.36*	*1.0*	*50*	*0*	*109*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.48*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*50.49*	*1.0*	*50*	*0*	*101*	*80 - 119*				
Surr: Toluene-d8	*50.06*	*1.0*	*50*	*0*	*100*	*89 - 112*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MS Sample ID: **HS20120235-06MS** Units: **ug/L** Analysis Date: **05-Dec-2020 15:47**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865308** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.49	1.0	20	0	92.5	78 - 124				
1,1,1-Trichloroethane	17.51	1.0	20	0	87.5	74 - 131				
1,1,2,2-Tetrachloroethane	19.13	1.0	20	0	95.7	71 - 121				
1,1,2-Trichloroethane	18.77	1.0	20	0	93.9	80 - 119				
1,1-Dichloroethane	16.49	1.0	20	0	82.5	77 - 125				
1,1-Dichloroethene	14.73	1.0	20	0	73.6	71 - 131				
1,1-Dichloropropene	18.98	1.0	20	0	94.9	78 - 125				
1,2,3-Trichlorobenzene	21.44	1.0	20	0	107	69 - 129				
1,2,3-Trichloropropane	19.35	1.0	20	26.56	-36.1	73 - 122				S
1,2,4-Trichlorobenzene	21.74	1.0	20	0	109	69 - 130				
1,2,4-Trimethylbenzene	21.19	1.0	20	0	106	76 - 124				
1,2-Dibromo-3-chloropropane	18.53	1.0	20	0	92.6	62 - 128				
1,2-Dibromoethane	18.6	1.0	20	0	93.0	77 - 121				
1,2-Dichlorobenzene	19.33	1.0	20	0	96.6	80 - 119				
1,2-Dichloroethane	17.21	1.0	20	0	86.0	73 - 128				
1,2-Dichloropropane	17.84	1.0	20	0	89.2	78 - 122				
1,3,5-Trimethylbenzene	20.32	1.0	20	0	102	75 - 124				
1,3-Dichlorobenzene	19.09	1.0	20	0	95.4	80 - 119				
1,3-Dichloropropane	18.94	1.0	20	0	94.7	80 - 119				
1,4-Dichlorobenzene	19.21	1.0	20	0	96.0	79 - 118				
2,2-Dichloropropane	17.16	1.0	20	0	85.8	60 - 139				
2-Butanone	33.5	2.0	40	0	83.8	56 - 143				
2-Chlorotoluene	19.57	1.0	20	0	97.8	79 - 122				
2-Hexanone	39.69	2.0	40	0	99.2	57 - 139				
4-Chlorotoluene	19.61	1.0	20	0	98.1	78 - 122				
4-Isopropyltoluene	21.14	1.0	20	0	106	77 - 127				
4-Methyl-2-pentanone	38.1	2.0	40	0	95.3	67 - 130				
Acetone	27.23	2.0	40	0	68.1	39 - 160				
Benzene	18.06	1.0	20	0	90.3	79 - 120				
Bromobenzene	18.88	1.0	20	0	94.4	80 - 120				
Bromochloromethane	14.83	1.0	20	0	74.1	78 - 123				S
Bromodichloromethane	18.58	1.0	20	0	92.9	79 - 125				
Bromoform	20.08	1.0	20	1.112	94.9	66 - 130				
Bromomethane	14.83	1.0	20	0	74.2	53 - 141				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MS Sample ID: **HS20120235-06MS** Units: **ug/L** Analysis Date: **05-Dec-2020 15:47**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865308** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	31.02	2.0	40	0	77.5	64 - 133				
Carbon tetrachloride	20	1.0	20	0.7654	96.2	72 - 136				
Chlorobenzene	18.23	1.0	20	0	91.2	82 - 118				
Chloroethane	13.86	1.0	20	0	69.3	60 - 138				
Chloroform	16.94	1.0	20	0	84.7	79 - 124				
Chloromethane	13	1.0	20	1.361	58.2	50 - 139				
cis-1,2-Dichloroethene	18.26	1.0	20	0	91.3	78 - 123				
cis-1,3-Dichloropropene	17.03	1.0	20	0	85.2	75 - 124				
Dibromochloromethane	17.3	1.0	20	0	86.5	74 - 126				
Dibromomethane	18.22	1.0	20	0	91.1	79 - 123				
Dichlorodifluoromethane	10.43	1.0	20	0	52.2	32 - 152				
Ethylbenzene	20.36	1.0	20	0	102	79 - 121				
Hexachlorobutadiene	22.15	1.0	20	0	111	66 - 134				
Isopropylbenzene	20.33	1.0	20	0	102	72 - 131				
m,p-Xylene	37.93	2.0	40	0	94.8	80 - 121				
Methylene chloride	15.83	2.0	20	0	79.2	74 - 124				
Naphthalene	18.89	1.0	20	0	94.5	61 - 128				
n-Butylbenzene	22.3	1.0	20	0	111	75 - 128				
n-Propylbenzene	20.09	1.0	20	0	100	76 - 126				
o-Xylene	18.65	1.0	20	0	93.2	78 - 122				
sec-Butylbenzene	21.42	1.0	20	0	107	77 - 126				
Styrene	18.69	1.0	20	0	93.4	78 - 123				
tert-Butylbenzene	20.86	1.0	20	0	104	78 - 124				
Tetrachloroethene	20.35	1.0	20	0	102	74 - 129				
Toluene	18.5	1.0	20	0	92.5	80 - 121				
trans-1,2-Dichloroethene	15.65	1.0	20	0	78.3	75 - 124				
trans-1,3-Dichloropropene	17.77	1.0	20	0	88.8	73 - 127				
Trichloroethene	20.87	1.0	20	0	104	79 - 123				
Trichlorofluoromethane	15.67	1.0	20	0	78.3	65 - 141				
Vinyl chloride	13.16	1.0	20	0	65.8	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.73*	*1.0*	*50*	*0*	*93.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.96*	*1.0*	*50*	*0*	*99.9*	*85 - 114*				
Surr: Dibromofluoromethane	*46.21*	*1.0*	*50*	*0*	*92.4*	*80 - 119*				
Surr: Toluene-d8	*50.97*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MSD Sample ID: **HS20120235-06MSD** Units: **ug/L** Analysis Date: **05-Dec-2020 16:08**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865309** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.06	1.0	20	0	90.3	78 - 124	18.49	2.36	20	
1,1,1-Trichloroethane	16.87	1.0	20	0	84.3	74 - 131	17.51	3.73	20	
1,1,2,2-Tetrachloroethane	19.84	1.0	20	0	99.2	71 - 121	19.13	3.59	20	
1,1,2-Trichloroethane	18.29	1.0	20	0	91.5	80 - 119	18.77	2.58	20	
1,1-Dichloroethane	16.03	1.0	20	0	80.1	77 - 125	16.49	2.87	20	
1,1-Dichloroethene	14.03	1.0	20	0	70.1	71 - 131	14.73	4.89	20	S
1,1-Dichloropropene	17.55	1.0	20	0	87.7	78 - 125	18.98	7.87	20	
1,2,3-Trichlorobenzene	24.43	1.0	20	0	122	69 - 129	21.44	13	20	
1,2,3-Trichloropropane	19.85	1.0	20	26.56	-33.6	73 - 122	19.35	2.56	20	S
1,2,4-Trichlorobenzene	23.34	1.0	20	0	117	69 - 130	21.74	7.1	20	
1,2,4-Trimethylbenzene	21.02	1.0	20	0	105	76 - 124	21.19	0.789	20	
1,2-Dibromo-3-chloropropane	22.99	1.0	20	0	115	62 - 128	18.53	21.5	20	R
1,2-Dibromoethane	18.12	1.0	20	0	90.6	77 - 121	18.6	2.64	20	
1,2-Dichlorobenzene	19.06	1.0	20	0	95.3	80 - 119	19.33	1.4	20	
1,2-Dichloroethane	17.02	1.0	20	0	85.1	73 - 128	17.21	1.07	20	
1,2-Dichloropropane	17.5	1.0	20	0	87.5	78 - 122	17.84	1.93	20	
1,3,5-Trimethylbenzene	19.97	1.0	20	0	99.8	75 - 124	20.32	1.75	20	
1,3-Dichlorobenzene	18.76	1.0	20	0	93.8	80 - 119	19.09	1.75	20	
1,3-Dichloropropane	18.19	1.0	20	0	91.0	80 - 119	18.94	4.04	20	
1,4-Dichlorobenzene	19.07	1.0	20	0	95.4	79 - 118	19.21	0.691	20	
2,2-Dichloropropane	16.54	1.0	20	0	82.7	60 - 139	17.16	3.65	20	
2-Butanone	33.79	2.0	40	0	84.5	56 - 143	33.5	0.852	20	
2-Chlorotoluene	19.13	1.0	20	0	95.7	79 - 122	19.57	2.24	20	
2-Hexanone	39.47	2.0	40	0	98.7	57 - 139	39.69	0.539	20	
4-Chlorotoluene	19.4	1.0	20	0	97.0	78 - 122	19.61	1.08	20	
4-Isopropyltoluene	21.2	1.0	20	0	106	77 - 127	21.14	0.281	20	
4-Methyl-2-pentanone	37.63	2.0	40	0	94.1	67 - 130	38.1	1.25	20	
Acetone	28.07	2.0	40	0	70.2	39 - 160	27.23	3.04	20	
Benzene	17.09	1.0	20	0	85.5	79 - 120	18.06	5.54	20	
Bromobenzene	18.85	1.0	20	0	94.3	80 - 120	18.88	0.15	20	
Bromochloromethane	15.21	1.0	20	0	76.1	78 - 123	14.83	2.55	20	S
Bromodichloromethane	18.43	1.0	20	0	92.1	79 - 125	18.58	0.823	20	
Bromoform	19.25	1.0	20	1.112	90.7	66 - 130	20.08	4.26	20	
Bromomethane	15	1.0	20	0	75.0	53 - 141	14.83	1.12	20	

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374019 (0) **Instrument: VOA6** **Method: VOLATILES - SW8260C**

MSD Sample ID: **HS20120235-06MSD** Units: **ug/L** Analysis Date: **05-Dec-2020 16:08**
Client ID: Run ID: **VOA6_374019** SeqNo: **5865309** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	30.21	2.0	40	0	75.5	64 - 133	31.02	2.63	20	
Carbon tetrachloride	18.89	1.0	20	0.7654	90.6	72 - 136	20	5.7	20	
Chlorobenzene	17.53	1.0	20	0	87.7	82 - 118	18.23	3.94	20	
Chloroethane	12.38	1.0	20	0	61.9	60 - 138	13.86	11.3	20	
Chloroform	16.17	1.0	20	0	80.8	79 - 124	16.94	4.68	20	
Chloromethane	11.94	1.0	20	1.361	52.9	50 - 139	13	8.45	20	
cis-1,2-Dichloroethene	16.43	1.0	20	0	82.2	78 - 123	18.26	10.6	20	
cis-1,3-Dichloropropene	16.52	1.0	20	0	82.6	75 - 124	17.03	3.04	20	
Dibromochloromethane	17.01	1.0	20	0	85.1	74 - 126	17.3	1.69	20	
Dibromomethane	17.74	1.0	20	0	88.7	79 - 123	18.22	2.66	20	
Dichlorodifluoromethane	10.21	1.0	20	0	51.0	32 - 152	10.43	2.15	20	
Ethylbenzene	19.25	1.0	20	0	96.2	79 - 121	20.36	5.62	20	
Hexachlorobutadiene	23.26	1.0	20	0	116	66 - 134	22.15	4.9	20	
Isopropylbenzene	19.18	1.0	20	0	95.9	72 - 131	20.33	5.81	20	
m,p-Xylene	35.55	2.0	40	0	88.9	80 - 121	37.93	6.47	20	
Methylene chloride	15.04	2.0	20	0	75.2	74 - 124	15.83	5.17	20	
Naphthalene	22.99	1.0	20	0	115	61 - 128	18.89	19.6	20	
n-Butylbenzene	22.38	1.0	20	0	112	75 - 128	22.3	0.387	20	
n-Propylbenzene	19.45	1.0	20	0	97.2	76 - 126	20.09	3.26	20	
o-Xylene	17.84	1.0	20	0	89.2	78 - 122	18.65	4.42	20	
sec-Butylbenzene	20.85	1.0	20	0	104	77 - 126	21.42	2.67	20	
Styrene	18.02	1.0	20	0	90.1	78 - 123	18.69	3.66	20	
tert-Butylbenzene	20.19	1.0	20	0	101	78 - 124	20.86	3.28	20	
Tetrachloroethene	19.15	1.0	20	0	95.8	74 - 129	20.35	6.07	20	
Toluene	18.05	1.0	20	0	90.3	80 - 121	18.5	2.44	20	
trans-1,2-Dichloroethene	15.06	1.0	20	0	75.3	75 - 124	15.65	3.85	20	
trans-1,3-Dichloropropene	17.1	1.0	20	0	85.5	73 - 127	17.77	3.83	20	
Trichloroethene	17.5	1.0	20	0	87.5	79 - 123	20.87	17.6	20	
Trichlorofluoromethane	15.2	1.0	20	0	76.0	65 - 141	15.67	3.01	20	
Vinyl chloride	12.32	1.0	20	0	61.6	58 - 137	13.16	6.52	20	
Surr: 1,2-Dichloroethane-d4	*47.17*	*1.0*	*50*	*0*	*94.3*	*81 - 118*	*46.73*	*0.953*	*20*	
Surr: 4-Bromofluorobenzene	*50.29*	*1.0*	*50*	*0*	*101*	*85 - 114*	*49.96*	*0.658*	*20*	
Surr: Dibromofluoromethane	*44.86*	*1.0*	*50*	*0*	*89.7*	*80 - 119*	*46.21*	*2.97*	*20*	
Surr: Toluene-d8	*50.75*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.97*	*0.427*	*20*	

ALS Houston, US Date: 15-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder:	HS20111260

QC BATCH REPORT

Batch ID:	**R374019 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES - SW8260C**

The following samples were analyzed in this batch: HS20111260-01 HS20111260-03

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374243 (0) **Instrument: WetChem_HS** **Method: CHEMICAL OXYGEN DEMAND BY E410.4**

MBLK Sample ID: **MBLK-R374243** Units: **mg/L** Analysis Date: **09-Dec-2020 10:30**
Client ID: Run ID: **WetChem_HS_374243** SeqNo: **5870382** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	15.0	15.0								U

LCS Sample ID: **LCS-R374243** Units: **mg/L** Analysis Date: **09-Dec-2020 10:30**
Client ID: Run ID: **WetChem_HS_374243** SeqNo: **5870381** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	98	15.0	100	0	98.0	85 - 115				

MS Sample ID: **HS20120271-01MS** Units: **mg/L** Analysis Date: **09-Dec-2020 10:30**
Client ID: Run ID: **WetChem_HS_374243** SeqNo: **5870384** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	53	15.0	50	6	94.0	80 - 120				

MSD Sample ID: **HS20120271-01MSD** Units: **mg/L** Analysis Date: **09-Dec-2020 10:30**
Client ID: Run ID: **WetChem_HS_374243** SeqNo: **5870383** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	55	15.0	50	6	98.0	80 - 120	53	3.7	20	

The following samples were analyzed in this batch: HS20111260-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374453 (0) **Instrument: ICS2100** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **11-Dec-2020 10:00**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875960** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **11-Dec-2020 11:47**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875962** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.49	0.500	20	0	97.4	80 - 120				
Sulfate	19.41	0.500	20	0	97.0	80 - 120				

MS Sample ID: **HS20120243-01MS** Units: **mg/L** Analysis Date: **11-Dec-2020 08:11**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875954** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	835.5	10.0	200	678	78.8	80 - 120				S
Sulfate	222.2	10.0	200	29.25	96.5	80 - 120				

MSD Sample ID: **HS20120243-01MSD** Units: **mg/L** Analysis Date: **11-Dec-2020 08:29**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875955** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	833.8	10.0	200	678	77.9	80 - 120	835.5	0.201	20	S
Sulfate	221.4	10.0	200	29.25	96.1	80 - 120	222.2	0.344	20	

The following samples were analyzed in this batch: HS20111260-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: HS20111260

QC BATCH REPORT

Batch ID: R374473 (0) **Instrument: Balance1** **Method: OIL & GREASE (HEM) BY E1664A**

MBLK Sample ID: **WBLKW-121120** Units: **mg/L** Analysis Date: **11-Dec-2020 14:20**
Client ID: Run ID: **Balance1_374473** SeqNo: **5876673** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	2.00	2.00								U

LCS Sample ID: **WLCSW-121120** Units: **mg/L** Analysis Date: **11-Dec-2020 14:20**
Client ID: Run ID: **Balance1_374473** SeqNo: **5876675** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	37.5	2.00	40	0	93.8	78 - 114				

LCSD Sample ID: **WLCSDW-121120** Units: **mg/L** Analysis Date: **11-Dec-2020 14:20**
Client ID: Run ID: **Balance1_374473** SeqNo: **5876674** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	39.4	2.00	40	0	98.5	78 - 114	37.5	4.94	18	

MS Sample ID: **HS20120088-01MS** Units: **mg/L** Analysis Date: **11-Dec-2020 14:20**
Client ID: Run ID: **Balance1_374473** SeqNo: **5876658** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	37.5	2.00	40	-0.4348	94.8	78 - 114				

The following samples were analyzed in this batch: HS20111260-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
WorkOrder: **HS20111260**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Groundwater Treatment Plant Quarterly Effluent Samples
Work Order: HS20111260

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20111260-01	LH18/24-SP650_112420	Login	11/25/2020 12:15:47 PM	PMG	Disposed
HS20111260-01	LH18/24-SP650_112420	Login	11/25/2020 12:15:47 PM	PMG	Disposed
HS20111260-01	LH18/24-SP650_112420	Login	11/25/2020 12:15:47 PM	PMG	Disposed
HS20111260-01	LH18/24-SP650_112420	Login	11/25/2020 12:15:47 PM	PMG	Disposed
HS20111260-01	LH18/24-SP650_112420	Login	11/25/2020 12:15:47 PM	PMG	Disposed
HS20111260-01	LH18/24-SP650_112420	Login	11/25/2020 12:15:47 PM	PMG	VOA230
HS20111260-02	LH18/24-SP650_112420_AIX	Login	11/25/2020 12:15:47 PM	PMG	Sub
HS20111260-03	Trip Blank	Login	11/25/2020 12:15:47 PM	PMG	VOA230

ALS Houston, US Date: 15-Dec-20

Sample Receipt Checklist

Work Order ID: HS20111260 **Date/Time Received:** **25-Nov-2020 10:45**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	25-Nov-2020 12:19	**Reviewed by:**	/S/ RJ Modashia	29-Nov-2020 11:35
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.2C U/C	IR31
Cooler(s)/Kit(s):	46379	
Date/Time sample(s) sent to storage:	11/25/2020 12:40	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, Tx. 77099 ATTN: RJ Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job:
GROUNDWATER TREATMENT PLANT QUARTERLY EFFLUENT SAMPLES

Prepared By: Scott Beesinger

P. O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: ROD Volatiles	Total Metals	Oil & Grease	Chemical Oxygen Demand	Chloride & Sulfate	1, 4 - DIOXANE	PERCHLORATE				Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_112420	Water	011/24/20 / 14:00		4	3		1								HCL	
LH18/24-SP650_112420	Water	011/24/20 / 14:00		1		1									HNO3	
LH18/24-SP650_112420	Water	011/24/20 / 14:00		2					1	1					NONE	
LH18/24-SP650_112420	Water	011/24/20 / 14:00		1				1							H2SO4	
LH18/24-SP650_112420_AIX	Water	011/24/20 / 14:00		1							1				NONE	
Trip Blank	Water	11/24/20		2	2										HCL	

Additional Remarks: **Standard TAT**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/24/20	14:30	Jon K Wesstrom	11/25/2020	10:45						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date

Remarks: 16379 VIC. 1.2 +3% CCF-CS

HS20111260

Bhate Environmental Associates, Inc.
Groundwater Treatment Plant Quarterly Effluent Sampl

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46379

CUSTODY SEAL

Date: 11/24/20 Time: 1430
Name: Scott Beesinger
Company: Shate

Seal Broken By:
Date: 11/25/20

46379

Must Deliver Next Business Day
Time and Tempature Sensitive!

46379

ORIGIN ID:SGRA (303) 592 2450
SCOTT BEESINGER
SHATE ENVIRONMENTAL ASSOCIATES
1209-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 08SEP20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 18x18x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-6666
REF: ADDITIONAL BOTTLES -- BO 73699 -- RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1496

WED - 25 NOV AA
PRIORITY OVERNIGHT

XH SGRA

77099
TX-US
IAH

December 15, 2020 Service Request No:E2001169

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20111260

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 25, 2020
For your reference, these analyses have been assigned our service request number **E2001169.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001169
Project:	HS20111260	**Date Received:**	11/25/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II . When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/25/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000652: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001169
Project: HS20111260

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001169-001	LH18/24-SP650_112420_AIX	11/24/2020	1400

Service Request Summary

Folder #: **E2001169**
Client Name: ALS Environmental - US
Project Name: HS20111260
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/25/20
Internal Due Date: 12/11/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20111260
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 3B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001169-001	LH18/24-SP650_112420_AIX	Water	11/24/20 1400	**IV**

Service Request Summary

Folder #:	**E2001169**
Client Name:	ALS Environmental - US
Project Name:	HS20111260
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	11/25/20
Internal Due Date:	12/11/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20111260
EDD:	No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved

Location: EHRMS-WIC 3B

Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Colorado** **COC ID:** **15224**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20111260
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20111260-02**	**LH18/24-SP650_112420_AIX**	**Water**	**24 Nov 2020 14:00**
	SUB_Perch-6850			11 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 11/25/20

Received By: [illegible] Date/Time: 11/25/20 1206

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR31

Date/Time Received: 11/25/20 Initials: CH Date/Time Logged in: 11/25/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		11/25/20	1200	CH	3.3	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371244 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/9/20 13:32

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001169-001	LH18/24-SP650_112420_AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001170-001	LH18/24-SP140_112420	.01	6850/ClO4 DOD			Water	10mL	
3	E2001171-001	LH18/24-SP650_112420_AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2001182-001	HBW7_120320	.01	6850/ClO4 DOD			Water	10mL	
5	E2001182-002	HBW10_120320	.01	6850/ClO4 DOD			Water	10mL	
6	E2001182-003	HBW1_120320	.01	6850/ClO4 DOD			Water	10mL	
7	E2001182-004	HBW1_120320_a	.01	6850/ClO4 DOD			Water	10mL	
8	E2001182-005	GPW1_120320	.01	6850/ClO4 DOD			Water	10mL	
9	E2001182-006	GPW3_120320	.01	6850/ClO4 DOD			Water	10mL	
10	E2001186-001	LH18/24-SP650_120220-AIX	.01	6850/ClO4 DOD			Water	10mL	
11	E2001186-002	LH18/24-SP650_120220-Between	.01	6850/ClO4 DOD			Water	10mL	
12	EQ2000652-01	MB		6850/ClO4 DOD			Liquid	10mL	
13	EQ2000652-02	LCS		6850/ClO4 DOD			Liquid	10mL	
14	EQ2000652-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000652-01	1.00µL	EQ2000652-02	1.00µL	EQ2000652-03	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001169-001	100.00µL	E2001170-001	100.00µL	E2001171-001	100.00µL	E2001182-001	100.00µL	E2001182-002	100.00µL	E2001182-003	100.00µL
E2001182-004	100.00µL	E2001182-005	100.00µL	E2001182-006	100.00µL	E2001186-001	100.00µL	E2001186-002	100.00µL	EQ2000652-01	100.00µL
EQ2000652-02	100.00µL	EQ2000652-03	100.00µL								

Preparation Steps

Step: Preparation
Started: 12/9/20 13:32
Finished: 12/9/20 15:00
By: GRIVERA
Comments

Comments:

Preparation Information Benchsheet

Prep Run#: 371244
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 12/9/20 13:32

Reviewed By: GR Date: 12/9/20

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001169
Project:	HS20111260	**Date Collected:**	11/24/20 1400
Sample Matrix:	Water	**Date Received:**	11/25/20
Sample Name:	LH18/24-SP650_112420_AIX	**Units:**	µg/L
Lab Code:	E2001169-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	12/ 9/20	12/14/20 10:46	371244	706941	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001169
Project:	HS20111260	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000652-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:09	371244	706933	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20111260
Sample Matrix: Water

Service Request: E2001169
Date Analyzed: 12/13/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371244

	Lab Control Sample EQ2000652-02			Duplicate Lab Control Sample EQ2000652-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.111	0.100	111	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001169
Project:	HS20111260	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000652-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:17	371244	706933	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001169
Project:	HS20111260	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000652-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:25	371244	706933	

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

December 18, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120241**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Dec 04, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120241

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120241-01	LH18/24-SP650_120220	Water		02-Dec-2020 14:00	04-Dec-2020 10:15	☐
HS20120241-02	LH18/24-SP650_120220-AIX	Water		02-Dec-2020 14:00	04-Dec-2020 10:15	☐
HS20120241-03	LH18/24-SP650_120220-Between	Water		02-Dec-2020 14:00	04-Dec-2020 10:15	☐

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120241

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached

WetChemistry by Method E350.3

Batch ID: R374117

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R374022

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20120241
Sample ID: LH18/24-SP650_120220
Lab ID:HS20120241-01
Collection Date: 02-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**0.48**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	08-Dec-2020 08:50
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**1.76**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	04-Dec-2020 12:01
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	18-Dec-2020 10:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20120241
Sample ID: LH18/24-SP650_120220-AIX
Lab ID:HS20120241-02
Collection Date: 02-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	15-Dec-2020 18:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20120241
Sample ID: LH18/24-SP650_120220-Between
Lab ID:HS20120241-03
Collection Date: 02-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	15-Dec-2020 18:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120241

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R374022 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20120241-01	LH18/24-SP650_120220	02 Dec 2020 14:00			04 Dec 2020 12:01	10
Batch ID: R374117 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20120241-01	LH18/24-SP650_120220	02 Dec 2020 14:00			08 Dec 2020 08:50	1
Batch ID: R374695 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20120241-02	LH18/24-SP650_120220-AIX	02 Dec 2020 14:00			15 Dec 2020 18:35	1
HS20120241-03	LH18/24-SP650_120220-Between	02 Dec 2020 14:00			15 Dec 2020 18:35	1
Batch ID: R374903 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20120241-01	LH18/24-SP650_120220	02 Dec 2020 14:00			18 Dec 2020 10:40	1

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120241

QC BATCH REPORT

Batch ID: R374022 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-374022** Units: **mg/L** Analysis Date: **04-Dec-2020 12:01**
Client ID: Run ID: **UV-2450_374022** SeqNo: **5865364** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-374022** Units: **mg/L** Analysis Date: **04-Dec-2020 12:01**
Client ID: Run ID: **UV-2450_374022** SeqNo: **5865365** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.258	0.0250	0.25	0	103	85 - 115				

MS Sample ID: **HS20120150-01MS** Units: **mg/L** Analysis Date: **04-Dec-2020 12:01**
Client ID: Run ID: **UV-2450_374022** SeqNo: **5865367** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.286	0.0250	0.25	0.016	108	80 - 120				

MSD Sample ID: **HS20120150-01MSD** Units: **mg/L** Analysis Date: **04-Dec-2020 12:01**
Client ID: Run ID: **UV-2450_374022** SeqNo: **5865368** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.284	0.0250	0.25	0.016	107	80 - 120	0.286	0.702	20	

The following samples were analyzed in this batch: HS20120241-01

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120241

QC BATCH REPORT

Batch ID: R374117 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-374117** Units: **mg/L** Analysis Date: **08-Dec-2020 08:50**
Client ID: Run ID: **WetChem_HS_374117** SeqNo: **5867502** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-374117** Units: **mg/L** Analysis Date: **08-Dec-2020 08:50**
Client ID: Run ID: **WetChem_HS_374117** SeqNo: **5867503** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.58	0.20	10	0	106	80 - 120				

MS Sample ID: **HS20120308-06MS** Units: **mg/L** Analysis Date: **08-Dec-2020 08:50**
Client ID: Run ID: **WetChem_HS_374117** SeqNo: **5867505** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.13	0.20	10	0.177	110	80 - 120				

MSD Sample ID: **HS20120308-06MSD** Units: **mg/L** Analysis Date: **08-Dec-2020 08:50**
Client ID: Run ID: **WetChem_HS_374117** SeqNo: **5867506** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.24	0.20	10	0.177	111	80 - 120	11.13	1.05	20	

The following samples were analyzed in this batch: HS20120241-01

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20120241**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 18-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120241

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120241-01	LH18/24-SP650_120220	Login	12/4/2020 11:31:02 AM	JRM	WET139
HS20120241-01	LH18/24-SP650_120220	Login	12/4/2020 11:31:02 AM	JRM	WET139
HS20120241-01	LH18/24-SP650_120220	Login	12/4/2020 11:31:02 AM	JRM	Sub
HS20120241-02	LH18/24-SP650_120220-AIX	Login	12/4/2020 11:31:02 AM	JRM	Sub

ALS Houston, US Date: 18-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120241 **Date/Time Received:** **04-Dec-2020 10:15**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Jared R. Makan* (eSignature) 04-Dec-2020 11:33 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 04-Dec-2020 16:26 (Date/Time)

Matrices: **Water** Carrier name: **ALS Courier**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.3°C/1.3°C UC/C	IR25	
Cooler(s)/Kit(s):	46374		
Date/Time sample(s) sent to storage:	12/04/2020 11:34		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_120220	Water	12/02/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_120220	Water	12/02/20 / 14:00		1			X		NONE	
LH18/24–SP650_120220_AIX	Water	12/02/20 / 14:00		1				X	NONE	
LH18/24-SP650_120220_Between	Water	12/02/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	12/02/20	14:30									

For Lab Use Only

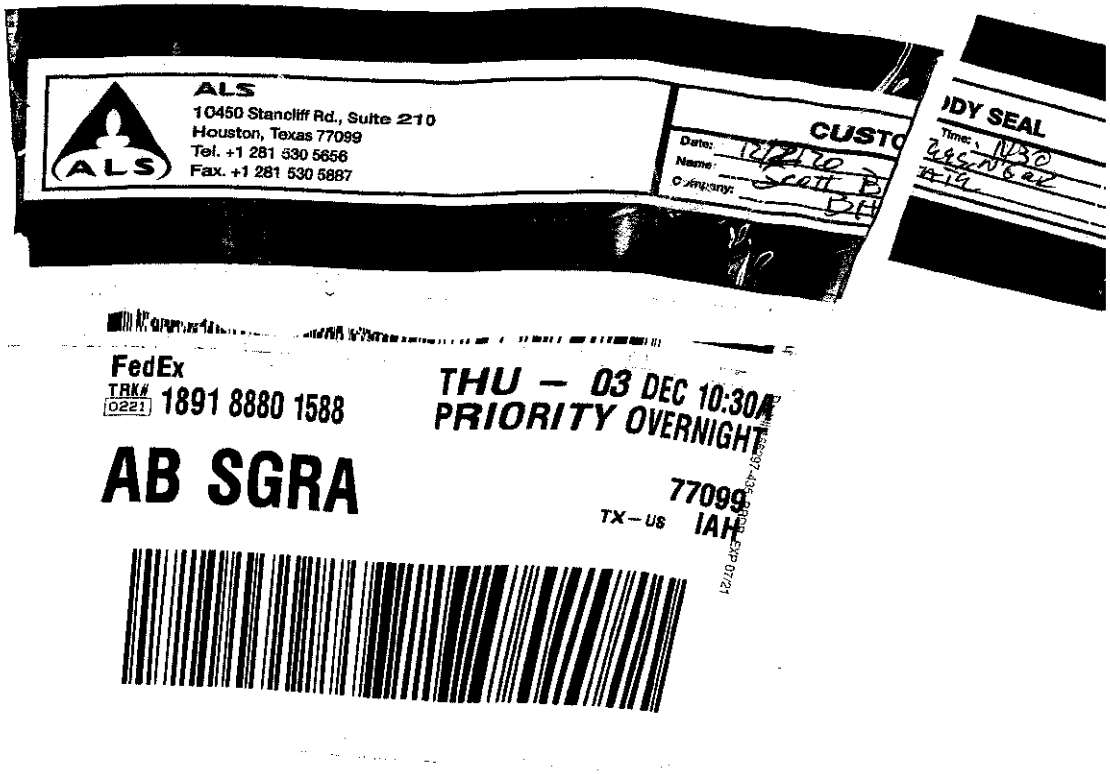
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mccann	12/04/20	10:15							

Remarks:
Cooler 46374 1225
Temp 1.3°C CFO

HS20120241

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
CUSTO
Date:
Name:
Company:
Scott B
DH
DY SEAL
Time:
FedEx
TRK#
0221
1891 8880 1588
THU — 03 DEC 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX — US
IAH

December 15, 2020 Service Request No:E2001186

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120241

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 04, 2020
For your reference, these analyses have been assigned our service request number **E2001186.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001186
Project:	HS20120241	**Date Received:**	12/04/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two samples were received for analysis at ALS Environmental in Houston on 12/04/20.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000652: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001186
Project: HS20120241

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001186-001	LH18/24-SP650_120220-AIX	12/2/2020	1400
E2001186-002	LH18/24-SP650_120220-Between	12/2/2020	1400

Service Request Summary

Folder #: **E2001186**
Client Name: ALS Environmental - US
Project Name: HS20120241
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/04/20
Internal Due Date: 12/18/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120241
EDD: No EDD Specified

2 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 1E
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001186-001	LH18/24-SP650_120220-AIX	Water	12/02/20 1400	**IV**
E2001186-002	LH18/24-SP650_120220-Between	Water	12/02/20 1400	**IV**

Service Request Summary

Folder #: **E2001186**
Client Name: ALS Environmental - US
Project Name: HS20120241
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/04/20
Internal Due Date: 12/18/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120241
EDD: No EDD Specified

2 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 1E
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	2	level II 12/18,level IV due 12/28

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
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F: +1 281 530 5887
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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15270**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120241
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120241-02**	**LH18/24-SP650_120220-AIX**	**Water**	**02 Dec 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			17 Dec 2020
2.	**HS20120241-03**	**LH18/24-SP650_120220-Between**	**Water**	**02 Dec 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			17 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Lawal Date/Time: 12/4/20 12:05

Received By: [illegible] Date/Time: 12/4/20 1205

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALH-T1 Thermometer ID IR31

Date/Time Received: 12/4/20 Initials: CH Date/Time Logged in: 12/4/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ◉ Courier (ALH) ○ Client

2. Samples received in: ◉ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ◉ No If yes, how many and where?
Were they intact? ○ Yes ○ No ◉ N/A
Were they signed and dated? ○ Yes ○ No ◉ N/A

4. Packing Material: ○ Inserts ◉ Baggies ○ Bubble Wrap ○ Gel Packs ◉ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/4/20	1205	CH	1.9	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ◉ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ◉ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ◉ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ◉ Yes ○ No
10. Did sample labels and tags agree with custody documents? ◉ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

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Houston, TX 77099
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F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371244 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/9/20 13:32

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001169-001	LH18/24-SP650_112420_AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001170-001	LH18/24-SP140_112420	.01	6850/ClO4 DOD			Water	10mL	
3	E2001171-001	LH18/24-SP650_112420_AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2001182-001	HBW7_120320	.01	6850/ClO4 DOD			Water	10mL	
5	E2001182-002	HBW10_120320	.01	6850/ClO4 DOD			Water	10mL	
6	E2001182-003	HBW1_120320	.01	6850/ClO4 DOD			Water	10mL	
7	E2001182-004	HBW1_120320_a	.01	6850/ClO4 DOD			Water	10mL	
8	E2001182-005	GPW1_120320	.01	6850/ClO4 DOD			Water	10mL	
9	E2001182-006	GPW3_120320	.01	6850/ClO4 DOD			Water	10mL	
10	E2001186-001	LH18/24-SP650_120220-AIX	.01	6850/ClO4 DOD			Water	10mL	
11	E2001186-002	LH18/24-SP650_120220-Between	.01	6850/ClO4 DOD			Water	10mL	
12	EQ2000652-01	MB		6850/ClO4 DOD			Liquid	10mL	
13	EQ2000652-02	LCS		6850/ClO4 DOD			Liquid	10mL	
14	EQ2000652-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000652-01	1.00µL	EQ2000652-02	1.00µL	EQ2000652-03	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001169-001	100.00µL	E2001170-001	100.00µL	E2001171-001	100.00µL	E2001182-001	100.00µL	E2001182-002	100.00µL	E2001182-003	100.00µL
E2001182-004	100.00µL	E2001182-005	100.00µL	E2001182-006	100.00µL	E2001186-001	100.00µL	E2001186-002	100.00µL	EQ2000652-01	100.00µL
EQ2000652-02	100.00µL	EQ2000652-03	100.00µL								

Preparation Steps

Step: Preparation
Started: 12/9/20 13:32
Finished: 12/9/20 15:00
By: GRIVERA
Comments

Comments:

Preparation Information Benchsheet

Prep Run#: 371244
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 12/9/20 13:32

Reviewed By: GR Date: 12/9/20

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001186
Project:	HS20120241	**Date Collected:**	12/ 2/20 1400
Sample Matrix:	Water	**Date Received:**	12/ 4/20
Sample Name:	LH18/24-SP650_120220-AIX	**Units:**	µg/L
Lab Code:	E2001186-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	12/ 9/20	12/14/20 11:01	371244	706941	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001186
Project:	HS20120241	**Date Collected:**	12/ 2/20 1400
Sample Matrix:	Water	**Date Received:**	12/ 4/20
Sample Name:	LH18/24-SP650_120220-Between	**Units:**	µg/L
Lab Code:	E2001186-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**3.17**		0.500	0.250	0.125	5	12/ 9/20	12/14/20 11:09	371244	706941	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001186
Project:	HS20120241	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000652-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:09	371244	706933	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001186
Project:	HS20120241	**Date Analyzed:**	12/13/20
Sample Matrix:	Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	371244

	Lab Control Sample EQ2000652-02			Duplicate Lab Control Sample EQ2000652-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.111	0.100	111	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001186
Project:	HS20120241	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000652-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:17	371244	706933	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001186
Project:	HS20120241	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000652-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	12/ 9/20	12/13/20 20:25	371244	706933	

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December 17, 2020 **Analytical Report for Service Request No:** K2011420

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: ALS Houston DOD TOC

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 08, 2020
For your reference, these analyses have been assigned our service request number **K2011420.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2011420
Date Received: 12/08/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 12/08/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Sydney A Wolfe Date 12/17/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
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K7011420

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15269**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120241
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120241-01**	**LH18/24-SP650_120220**	**Water**	**02 Dec 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			17 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 12/7/2020 1800

Received By: JReddersen Date/Time: 12/8/20 1000

Cooler ID(s): _____ Temperature(s): _____

PM KL

Cooler Receipt and Preservation Form

ient AB Houston Service Request K20 11420

ceived: 12/8/20 Opened: 12/8/20 By: AP Unloaded: 12/8/20 By: AP

Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*

Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*

Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 front

If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:

If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":

Were samples received within the method specified temperature ranges? NA (Y) N

If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

pplicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

emp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
4.1	—	IR02	15269	—	—	1891 8883 4329	

Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____

Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N

Were samples received in good condition (unbroken) NA (Y) N

Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N

. Did all sample labels and tags agree with custody papers? NA (Y) N

. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N

. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N

. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N

. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

lotes, Discrepancies, Resolutions: _____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2011420
Project:	ALS Houston DOD TOC	**Date Collected:**	12/2/20
Sample Matrix:	Water	**Date Received:**	12/8/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_120220	K2011420-001	**1.14**	0.50	0.20	0.07	1	12/16/20 14:30	
Method Blank	K2011420-MB	ND U	0.50	0.20	0.07	1	12/16/20 14:30	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2011420
Project:	ALS Houston DOD TOC	**Date Analyzed:**	12/16/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	707179

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2011420-LCS	24.2	25.0	97	83-117

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December 15, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120243**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Dec 04, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20120243

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120243-01	LH18/24-SP650_120220	Water		02-Dec-2020 14:00	04-Dec-2020 10:15	☐
HS20120243-02	Trip Blank	Water	VBLKW-112420-41	02-Dec-2020 00:00	04-Dec-2020 10:15	☐

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20120243

GCMS Volatiles by Method SW8260

Batch ID: R374634

Sample ID: LH18/24-SP650_120220 HS20120243-01)

- The recovery of the Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) associated with this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS/MSD may be due to sample matrix interference.

Sample ID: LH18/24-SP650_120220 (HS20120243-01MSD)

- The RPD between the MS and MSD was outside of the control limit.

WetChemistry by Method SW9056

Batch ID: R374453

Sample ID: LH18/24-SP650_120220 (HS20120243-01MS)

- The recovery of the Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) associated with this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS/MSD may be due to sample matrix interference. (Chloride)

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20120243
Sample ID: LH18/24-SP650_120220 Lab ID:HS20120243-01
Collection Date: 02-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 13:40
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	14-Dec-2020 13:40
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	14-Dec-2020 13:40
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	14-Dec-2020 13:40
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 13:40
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 13:40
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	14-Dec-2020 13:40
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	14-Dec-2020 13:40
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 13:40
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	14-Dec-2020 13:40
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	14-Dec-2020 13:40
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 13:40
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	14-Dec-2020 13:40
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20120243
Sample ID: LH18/24-SP650_120220 Lab ID:HS20120243-01
Collection Date: 02-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
cis-1,2-Dichloroethene	**7.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	14-Dec-2020 13:40
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	14-Dec-2020 13:40
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	14-Dec-2020 13:40
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	14-Dec-2020 13:40
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 13:40
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 13:40
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Trichloroethene	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	14-Dec-2020 13:40
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 13:40
Vinyl chloride	**0.41**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	14-Dec-2020 13:40
Surr: 1,2-Dichloroethane-d4	*83.7*			**0**	*81-118*	*%REC*	*1*	*14-Dec-2020 13:40*
Surr: 4-Bromofluorobenzene	*91.0*			**0**	*85-114*	*%REC*	*1*	*14-Dec-2020 13:40*
Surr: Dibromofluoromethane	*86.5*			**0**	*80-119*	*%REC*	*1*	*14-Dec-2020 13:40*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*14-Dec-2020 13:40*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**678**		**4.00**	**10.0**	**10.0**	**mg/L**	20	11-Dec-2020 07:53
Sulfate	**29.4**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Dec-2020 07:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20120243

Sample ID: Trip Blank Lab ID:HS20120243-02

Collection Date: 02-Dec-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 14:01
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	14-Dec-2020 14:01
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	14-Dec-2020 14:01
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	14-Dec-2020 14:01
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 14:01
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 14:01
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	14-Dec-2020 14:01
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	14-Dec-2020 14:01
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 14:01
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	14-Dec-2020 14:01
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	14-Dec-2020 14:01
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 14:01
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	14-Dec-2020 14:01
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20120243
Sample ID: Trip Blank Lab ID:HS20120243-02
Collection Date: 02-Dec-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	14-Dec-2020 14:01
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	14-Dec-2020 14:01
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	14-Dec-2020 14:01
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	14-Dec-2020 14:01
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	14-Dec-2020 14:01
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	14-Dec-2020 14:01
Surr: 1,2-Dichloroethane-d4	*86.1*			**0**	*81-118*	*%REC*	*1*	*14-Dec-2020 14:01*
Surr: 4-Bromofluorobenzene	*93.1*			**0**	*85-114*	*%REC*	*1*	*14-Dec-2020 14:01*
Surr: Dibromofluoromethane	*88.3*			**0**	*80-119*	*%REC*	*1*	*14-Dec-2020 14:01*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*14-Dec-2020 14:01*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R374453 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20120243-01	LH18/24-SP650_120220	02 Dec 2020 14:00			11 Dec 2020 07:53	20
HS20120243-01	LH18/24-SP650_120220	02 Dec 2020 14:00			11 Dec 2020 07:35	1
Batch ID: R374634 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120243-01	LH18/24-SP650_120220	02 Dec 2020 14:00			14 Dec 2020 13:40	1
HS20120243-02	Trip Blank	02 Dec 2020 00:00			14 Dec 2020 14:01	1

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374634 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201214** Units: **ug/L** Analysis Date: **14-Dec-2020 12:58**
Client ID: Run ID: **VOA6_374634** SeqNo: **5880913** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374634 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201214** Units: **ug/L** Analysis Date: **14-Dec-2020 12:58**
Client ID: Run ID: **VOA6_374634** SeqNo: **5880913** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.1*	*1.0*	*50*	*0*	*86.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.28*	*1.0*	*50*	*0*	*94.6*	*85 - 114*				
Surr: Dibromofluoromethane	*43.93*	*1.0*	*50*	*0*	*87.9*	*80 - 119*				
Surr: Toluene-d8	*52.45*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374634 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201214** Units: **ug/L** Analysis Date: **14-Dec-2020 12:16**
Client ID: Run ID: **VOA6_374634** SeqNo: **5880912** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.91	1.0	20	0	99.6	78 - 124				
1,1,1-Trichloroethane	19.72	1.0	20	0	98.6	74 - 131				
1,1,2,2-Tetrachloroethane	20.67	1.0	20	0	103	71 - 121				
1,1,2-Trichloroethane	19.38	1.0	20	0	96.9	80 - 119				
1,1-Dichloroethane	19.67	1.0	20	0	98.4	77 - 125				
1,1-Dichloroethene	18.55	1.0	20	0	92.8	71 - 131				
1,1-Dichloropropene	18.72	1.0	20	0	93.6	78 - 125				
1,2,3-Trichlorobenzene	22.85	1.0	20	0	114	69 - 129				
1,2,3-Trichloropropane	20.24	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	21.78	1.0	20	0	109	69 - 130				
1,2,4-Trimethylbenzene	20.64	1.0	20	0	103	76 - 124				
1,2-Dibromo-3-chloropropane	20.11	1.0	20	0	101	62 - 128				
1,2-Dibromoethane	20.03	1.0	20	0	100	77 - 121				
1,2-Dichlorobenzene	19.85	1.0	20	0	99.2	80 - 119				
1,2-Dichloroethane	19.54	1.0	20	0	97.7	73 - 128				
1,2-Dichloropropane	19.7	1.0	20	0	98.5	78 - 122				
1,3,5-Trimethylbenzene	19.74	1.0	20	0	98.7	75 - 124				
1,3-Dichlorobenzene	19.84	1.0	20	0	99.2	80 - 119				
1,3-Dichloropropane	19.49	1.0	20	0	97.4	80 - 119				
1,4-Dichlorobenzene	20.55	1.0	20	0	103	79 - 118				
2,2-Dichloropropane	19.71	1.0	20	0	98.6	60 - 139				
2-Butanone	40.65	2.0	40	0	102	56 - 143				
2-Chlorotoluene	20.79	1.0	20	0	104	79 - 122				
2-Hexanone	37.24	2.0	40	0	93.1	57 - 139				
4-Chlorotoluene	20.6	1.0	20	0	103	78 - 122				
4-Isopropyltoluene	19.03	1.0	20	0	95.2	77 - 127				
4-Methyl-2-pentanone	36.49	2.0	40	0	91.2	67 - 130				
Acetone	44.96	2.0	40	0	112	39 - 160				
Benzene	19.24	1.0	20	0	96.2	79 - 120				
Bromobenzene	20.92	1.0	20	0	105	80 - 120				
Bromochloromethane	20.04	1.0	20	0	100	78 - 123				
Bromodichloromethane	20.6	1.0	20	0	103	79 - 125				
Bromoform	21.17	1.0	20	0	106	66 - 130				
Bromomethane	21.74	1.0	20	0	109	53 - 141				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374634 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201214** Units: **ug/L** Analysis Date: **14-Dec-2020 12:16**
Client ID: Run ID: **VOA6_374634** SeqNo: **5880912** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.2	2.0	40	0	103	64 - 133				
Carbon tetrachloride	19.62	1.0	20	0	98.1	72 - 136				
Chlorobenzene	19.81	1.0	20	0	99.1	82 - 118				
Chloroethane	19.4	1.0	20	0	97.0	60 - 138				
Chloroform	19.65	1.0	20	0	98.2	79 - 124				
Chloromethane	17.9	1.0	20	0	89.5	50 - 139				
cis-1,2-Dichloroethene	19.68	1.0	20	0	98.4	78 - 123				
cis-1,3-Dichloropropene	20.32	1.0	20	0	102	75 - 124				
Dibromochloromethane	19.84	1.0	20	0	99.2	74 - 126				
Dibromomethane	20.57	1.0	20	0	103	79 - 123				
Dichlorodifluoromethane	18.09	1.0	20	0	90.5	32 - 152				
Ethylbenzene	19.92	1.0	20	0	99.6	79 - 121				
Hexachlorobutadiene	22.51	1.0	20	0	113	66 - 134				
Isopropylbenzene	18.7	1.0	20	0	93.5	72 - 131				
m,p-Xylene	39.21	2.0	40	0	98.0	80 - 121				
Methylene chloride	19.92	2.0	20	0	99.6	74 - 124				
Naphthalene	21.22	1.0	20	0	106	61 - 128				
n-Butylbenzene	20.18	1.0	20	0	101	75 - 128				
n-Propylbenzene	19.71	1.0	20	0	98.5	76 - 126				
o-Xylene	19.49	1.0	20	0	97.4	78 - 122				
sec-Butylbenzene	19.28	1.0	20	0	96.4	77 - 126				
Styrene	20.01	1.0	20	0	100	78 - 123				
tert-Butylbenzene	19.15	1.0	20	0	95.8	78 - 124				
Tetrachloroethene	18.87	1.0	20	0	94.4	74 - 129				
Toluene	19.84	1.0	20	0	99.2	80 - 121				
trans-1,2-Dichloroethene	20.24	1.0	20	0	101	75 - 124				
trans-1,3-Dichloropropene	20.8	1.0	20	0	104	73 - 127				
Trichloroethene	18.87	1.0	20	0	94.3	79 - 123				
Trichlorofluoromethane	18.46	1.0	20	0	92.3	65 - 141				
Vinyl chloride	18.8	1.0	20	0	94.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.11*	*1.0*	*50*	*0*	*100*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.12*	*1.0*	*50*	*0*	*104*	*85 - 114*				
Surr: Dibromofluoromethane	*48.41*	*1.0*	*50*	*0*	*96.8*	*80 - 119*				
Surr: Toluene-d8	*49.97*	*1.0*	*50*	*0*	*99.9*	*89 - 112*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374634 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20120243-01MS** Units: **ug/L** Analysis Date: **14-Dec-2020 16:50**
Client ID: **LH18/24-SP650_120220** Run ID: **VOA6_374634** SeqNo: **5880924** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.77	1.0	20	0	109	78 - 124				
1,1,1-Trichloroethane	18.27	1.0	20	0	91.3	74 - 131				
1,1,2,2-Tetrachloroethane	21.85	1.0	20	0	109	71 - 121				
1,1,2-Trichloroethane	21.22	1.0	20	0	106	80 - 119				
1,1-Dichloroethane	15.26	1.0	20	0	76.3	77 - 125				S
1,1-Dichloroethene	10.96	1.0	20	0	54.8	71 - 131				S
1,1-Dichloropropene	18.83	1.0	20	0	94.1	78 - 125				
1,2,3-Trichlorobenzene	21.99	1.0	20	0	110	69 - 129				
1,2,3-Trichloropropane	21.48	1.0	20	0	107	73 - 122				
1,2,4-Trichlorobenzene	22.74	1.0	20	0	114	69 - 130				
1,2,4-Trimethylbenzene	21.82	1.0	20	0	109	76 - 124				
1,2-Dibromo-3-chloropropane	20.54	1.0	20	0	103	62 - 128				
1,2-Dibromoethane	20.07	1.0	20	0	100	77 - 121				
1,2-Dichlorobenzene	20.8	1.0	20	0	104	80 - 119				
1,2-Dichloroethane	19.43	1.0	20	0	97.1	73 - 128				
1,2-Dichloropropane	19.75	1.0	20	0	98.8	78 - 122				
1,3,5-Trimethylbenzene	21.48	1.0	20	0	107	75 - 124				
1,3-Dichlorobenzene	20.55	1.0	20	0	103	80 - 119				
1,3-Dichloropropane	20.73	1.0	20	0	104	80 - 119				
1,4-Dichlorobenzene	21.39	1.0	20	0	107	79 - 118				
2,2-Dichloropropane	17.69	1.0	20	0	88.5	60 - 139				
2-Butanone	33.58	2.0	40	0	83.9	56 - 143				
2-Chlorotoluene	22.82	1.0	20	0	114	79 - 122				
2-Hexanone	42.58	2.0	40	0	106	57 - 139				
4-Chlorotoluene	21.33	1.0	20	0	107	78 - 122				
4-Isopropyltoluene	22.45	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	39.17	2.0	40	0	97.9	67 - 130				
Acetone	28.34	2.0	40	0	70.9	39 - 160				
Benzene	18.26	1.0	20	0	91.3	79 - 120				
Bromobenzene	21.43	1.0	20	0	107	80 - 120				
Bromochloromethane	17.29	1.0	20	0	86.5	78 - 123				
Bromodichloromethane	21.03	1.0	20	0	105	79 - 125				
Bromoform	21.43	1.0	20	0	107	66 - 130				
Bromomethane	5.984	1.0	20	0	29.9	53 - 141				S

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374634 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20120243-01MS** Units: **ug/L** Analysis Date: **14-Dec-2020 16:50**
Client ID: **LH18/24-SP650_120220** Run ID: **VOA6_374634** SeqNo: **5880924** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	17.67	2.0	40	0	44.2	64 - 133				S
Carbon tetrachloride	21.04	1.0	20	0	105	72 - 136				
Chlorobenzene	20.65	1.0	20	0	103	82 - 118				
Chloroethane	59.47	1.0	20	0	297	60 - 138				S
Chloroform	17.73	1.0	20	0	88.6	79 - 124				
Chloromethane	46.13	1.0	20	0	231	50 - 139				S
cis-1,2-Dichloroethene	25.05	1.0	20	7.65	87.0	78 - 123				
cis-1,3-Dichloropropene	20.09	1.0	20	0	100	75 - 124				
Dibromochloromethane	20.87	1.0	20	0	104	74 - 126				
Dibromomethane	19.85	1.0	20	0	99.3	79 - 123				
Dichlorodifluoromethane	2.94	1.0	20	0	14.7	32 - 152				S
Ethylbenzene	22.42	1.0	20	0	112	79 - 121				
Hexachlorobutadiene	23.03	1.0	20	0	115	66 - 134				
Isopropylbenzene	22.15	1.0	20	0	111	72 - 131				
m,p-Xylene	42.31	2.0	40	0	106	80 - 121				
Methylene chloride	13.99	2.0	20	0	70.0	74 - 124				S
Naphthalene	19.94	1.0	20	0	99.7	61 - 128				
n-Butylbenzene	23.31	1.0	20	0	117	75 - 128				
n-Propylbenzene	22.86	1.0	20	0	114	76 - 126				
o-Xylene	20.87	1.0	20	0	104	78 - 122				
sec-Butylbenzene	23.17	1.0	20	0	116	77 - 126				
Styrene	20.35	1.0	20	0	102	78 - 123				
tert-Butylbenzene	22.9	1.0	20	0	115	78 - 124				
Tetrachloroethene	21.42	1.0	20	0	107	74 - 129				
Toluene	20.63	1.0	20	0	103	80 - 121				
trans-1,2-Dichloroethene	15.09	1.0	20	0	75.5	75 - 124				
trans-1,3-Dichloropropene	20.48	1.0	20	0	102	73 - 127				
Trichloroethene	20.13	1.0	20	1.205	94.6	79 - 123				
Trichlorofluoromethane	8.367	1.0	20	0	41.8	65 - 141				S
Vinyl chloride	2.093	1.0	20	0.4082	8.42	58 - 137				S
Surr: 1,2-Dichloroethane-d4	*44.72*	*1.0*	*50*	*0*	*89.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.81*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*44.35*	*1.0*	*50*	*0*	*88.7*	*80 - 119*				
Surr: Toluene-d8	*51.89*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374634 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120243-01MSD** Units: **ug/L** Analysis Date: **14-Dec-2020 17:11**
Client ID: **LH18/24-SP650_120220** Run ID: **VOA6_374634** SeqNo: **5880925** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.24	1.0	20	0	106	78 - 124	21.77	2.49	20	
1,1,1-Trichloroethane	17.52	1.0	20	0	87.6	74 - 131	18.27	4.19	20	
1,1,2,2-Tetrachloroethane	21.97	1.0	20	0	110	71 - 121	21.85	0.582	20	
1,1,2-Trichloroethane	21	1.0	20	0	105	80 - 119	21.22	1.05	20	
1,1-Dichloroethane	15.36	1.0	20	0	76.8	77 - 125	15.26	0.616	20	S
1,1-Dichloroethene	10.99	1.0	20	0	54.9	71 - 131	10.96	0.261	20	S
1,1-Dichloropropene	18.29	1.0	20	0	91.5	78 - 125	18.83	2.87	20	
1,2,3-Trichlorobenzene	23.73	1.0	20	0	119	69 - 129	21.99	7.58	20	
1,2,3-Trichloropropane	21.58	1.0	20	0	108	73 - 122	21.48	0.464	20	
1,2,4-Trichlorobenzene	23.01	1.0	20	0	115	69 - 130	22.74	1.2	20	
1,2,4-Trimethylbenzene	22.92	1.0	20	0	115	76 - 124	21.82	4.95	20	
1,2-Dibromo-3-chloropropane	21.86	1.0	20	0	109	62 - 128	20.54	6.23	20	
1,2-Dibromoethane	20.63	1.0	20	0	103	77 - 121	20.07	2.74	20	
1,2-Dichlorobenzene	20.97	1.0	20	0	105	80 - 119	20.8	0.816	20	
1,2-Dichloroethane	19.24	1.0	20	0	96.2	73 - 128	19.43	0.953	20	
1,2-Dichloropropane	18.84	1.0	20	0	94.2	78 - 122	19.75	4.72	20	
1,3,5-Trimethylbenzene	22.01	1.0	20	0	110	75 - 124	21.48	2.44	20	
1,3-Dichlorobenzene	21.68	1.0	20	0	108	80 - 119	20.55	5.35	20	
1,3-Dichloropropane	21.14	1.0	20	0	106	80 - 119	20.73	2	20	
1,4-Dichlorobenzene	21.66	1.0	20	0	108	79 - 118	21.39	1.28	20	
2,2-Dichloropropane	16.92	1.0	20	0	84.6	60 - 139	17.69	4.49	20	
2-Butanone	32.61	2.0	40	0	81.5	56 - 143	33.58	2.94	20	
2-Chlorotoluene	23.58	1.0	20	0	118	79 - 122	22.82	3.3	20	
2-Hexanone	39.34	2.0	40	0	98.4	57 - 139	42.58	7.9	20	
4-Chlorotoluene	21.84	1.0	20	0	109	78 - 122	21.33	2.37	20	
4-Isopropyltoluene	22.66	1.0	20	0	113	77 - 127	22.45	0.933	20	
4-Methyl-2-pentanone	39.27	2.0	40	0	98.2	67 - 130	39.17	0.257	20	
Acetone	28.23	2.0	40	0	70.6	39 - 160	28.34	0.42	20	
Benzene	18.21	1.0	20	0	91.0	79 - 120	18.26	0.316	20	
Bromobenzene	20.96	1.0	20	0	105	80 - 120	21.43	2.2	20	
Bromochloromethane	16.45	1.0	20	0	82.3	78 - 123	17.29	4.98	20	
Bromodichloromethane	20.4	1.0	20	0	102	79 - 125	21.03	3.04	20	
Bromoform	21.48	1.0	20	0	107	66 - 130	21.43	0.244	20	
Bromomethane	6.914	1.0	20	0	34.6	53 - 141	5.984	14.4	20	S

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374634 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120243-01MSD** Units: **ug/L** Analysis Date: **14-Dec-2020 17:11**
Client ID: **LH18/24-SP650_120220** Run ID: **VOA6_374634** SeqNo: **5880925** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	17.02	2.0	40	0	42.5	64 - 133	17.67	3.73	20	S
Carbon tetrachloride	20.79	1.0	20	0	104	72 - 136	21.04	1.22	20	
Chlorobenzene	20.13	1.0	20	0	101	82 - 118	20.65	2.57	20	
Chloroethane	15.09	1.0	20	0	75.5	60 - 138	59.47	119	20	R
Chloroform	17.76	1.0	20	0	88.8	79 - 124	17.73	0.204	20	
Chloromethane	3.478	1.0	20	0	17.4	50 - 139	46.13	172	20	SR
cis-1,2-Dichloroethene	24.74	1.0	20	7.65	85.4	78 - 123	25.05	1.24	20	
cis-1,3-Dichloropropene	19.24	1.0	20	0	96.2	75 - 124	20.09	4.32	20	
Dibromochloromethane	21.2	1.0	20	0	106	74 - 126	20.87	1.6	20	
Dibromomethane	19.85	1.0	20	0	99.3	79 - 123	19.85	0.00798	20	
Dichlorodifluoromethane	3.017	1.0	20	0	15.1	32 - 152	2.94	2.57	20	S
Ethylbenzene	21.97	1.0	20	0	110	79 - 121	22.42	2.02	20	
Hexachlorobutadiene	23.94	1.0	20	0	120	66 - 134	23.03	3.84	20	
Isopropylbenzene	22.22	1.0	20	0	111	72 - 131	22.15	0.322	20	
m,p-Xylene	41.98	2.0	40	0	105	80 - 121	42.31	0.799	20	
Methylene chloride	14.68	2.0	20	0	73.4	74 - 124	13.99	4.78	20	S
Naphthalene	22.35	1.0	20	0	112	61 - 128	19.94	11.4	20	
n-Butylbenzene	23.51	1.0	20	0	118	75 - 128	23.31	0.848	20	
n-Propylbenzene	23.35	1.0	20	0	117	76 - 126	22.86	2.11	20	
o-Xylene	20.67	1.0	20	0	103	78 - 122	20.87	0.956	20	
sec-Butylbenzene	23.42	1.0	20	0	117	77 - 126	23.17	1.07	20	
Styrene	19.98	1.0	20	0	99.9	78 - 123	20.35	1.83	20	
tert-Butylbenzene	23.27	1.0	20	0	116	78 - 124	22.9	1.59	20	
Tetrachloroethene	21.52	1.0	20	0	108	74 - 129	21.42	0.438	20	
Toluene	20.65	1.0	20	0	103	80 - 121	20.63	0.113	20	
trans-1,2-Dichloroethene	15.12	1.0	20	0	75.6	75 - 124	15.09	0.18	20	
trans-1,3-Dichloropropene	19.98	1.0	20	0	99.9	73 - 127	20.48	2.47	20	
Trichloroethene	19.38	1.0	20	1.205	90.9	79 - 123	20.13	3.8	20	
Trichlorofluoromethane	8.452	1.0	20	0	42.3	65 - 141	8.367	1.01	20	S
Vinyl chloride	1.971	1.0	20	0.4082	7.82	58 - 137	2.093	5.96	20	S
Surr: 1,2-Dichloroethane-d4	*43.6*	*1.0*	*50*	*0*	*87.2*	*81 - 118*	*44.72*	*2.54*	*20*	
Surr: 4-Bromofluorobenzene	*49.33*	*1.0*	*50*	*0*	*98.7*	*85 - 114*	*50.81*	*2.97*	*20*	
Surr: Dibromofluoromethane	*44.08*	*1.0*	*50*	*0*	*88.2*	*80 - 119*	*44.35*	*0.62*	*20*	
Surr: Toluene-d8	*51.77*	*1.0*	*50*	*0*	*104*	*89 - 112*	*51.89*	*0.219*	*20*	

ALS Houston, US Date: 15-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20120243

QC BATCH REPORT

Batch ID:	**R374634 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20120243-01 HS20120243-02

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120243

QC BATCH REPORT

Batch ID: R374453 (0) **Instrument: ICS2100** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **11-Dec-2020 10:00**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875960** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-** Units: **mg/L** Analysis Date: **11-Dec-2020 11:47**
Client ID: Run ID: **ICS2100_374453** SeqNo: **5875962** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.49	0.500	20	0	97.4	80 - 120				
Sulfate	19.41	0.500	20	0	97.0	80 - 120				

MS Sample ID: **HS20120243-01MS** Units: **mg/L** Analysis Date: **11-Dec-2020 08:11**
Client ID: **LH18/24-SP650_120220** Run ID: **ICS2100_374453** SeqNo: **5875954** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	835.5	10.0	200	678	78.8	80 - 120				S
Sulfate	222.2	10.0	200	29.25	96.5	80 - 120				

MSD Sample ID: **HS20120243-01MSD** Units: **mg/L** Analysis Date: **11-Dec-2020 08:29**
Client ID: **LH18/24-SP650_120220** Run ID: **ICS2100_374453** SeqNo: **5875955** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	833.8	10.0	200	678	77.9	80 - 120	835.5	0.201	20	S
Sulfate	221.4	10.0	200	29.25	96.1	80 - 120	222.2	0.344	20	

The following samples were analyzed in this batch: HS20120243-01

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20120243**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 15-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20120243

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120243-01	LH18/24-SP650_120220	Login	12/4/2020 12:17:02 PM	JRM	WET381
HS20120243-01	LH18/24-SP650_120220	Login	12/4/2020 12:17:02 PM	JRM	VOA177
HS20120243-02	Trip Blank	Login	12/4/2020 12:17:02 PM	JRM	VOA177

ALS Houston, US Date: 15-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120243 **Date/Time Received:** **04-Dec-2020 10:15**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Jared R. Makan* (eSignature) 04-Dec-2020 12:19 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 04-Dec-2020 16:27 (Date/Time)

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.3°C/1.3°C UC/C	IR25	
Cooler(s)/Kit(s):	46374		
Date/Time sample(s) sent to storage:	12/04/2020 12:20		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT
BI-WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_120220	Water	12/02/20 / 14:00		3	3		HCL	
LH18/24-SP650_120220	Water	12/02/20 / 14:00		1		1	NONE	
Trip Blank	Water	12/02/20		2	2		HCL	

Additional Remarks: **Standard TAT on other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	12/02/20	14:30									

For Lab Use Only

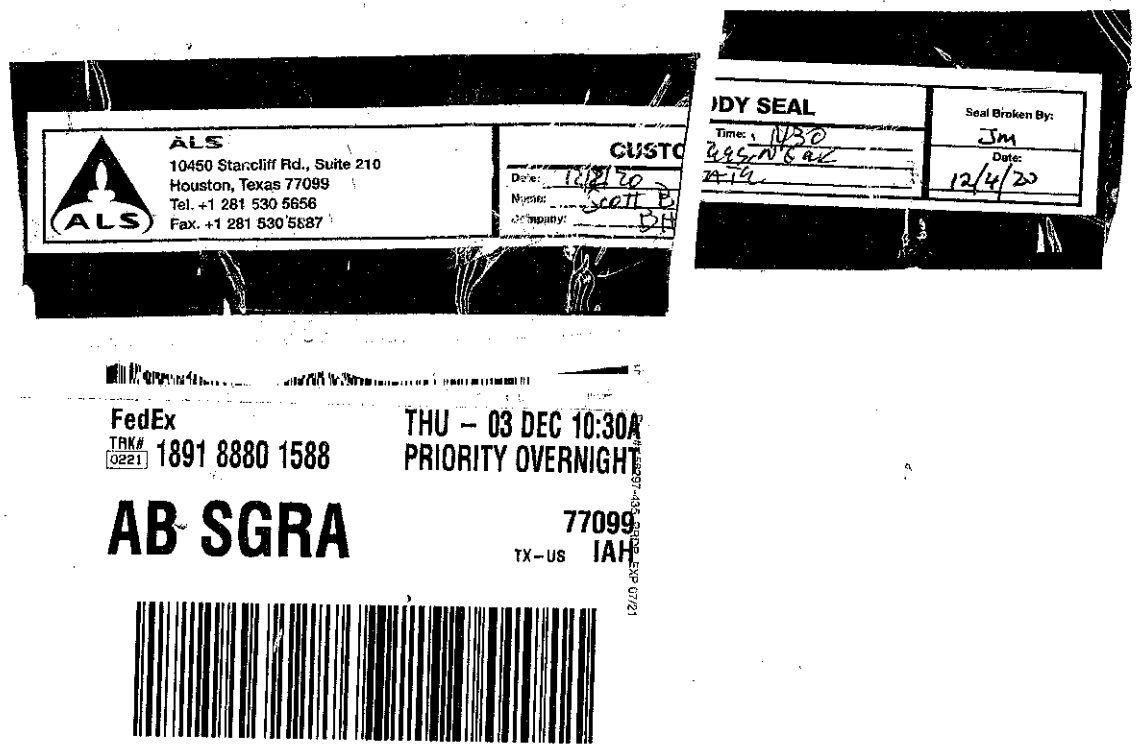
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Pennington	12/4/20	10:45							

Remarks
Cooler 46374 1225
Temp 1.3°C CFO

HS20120243

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTO
Date: 12/4/20
Name: Scott B
Company: BH

DY SEAL
Time: 1130
Seal Broken By:
JM
Date:
12/4/20

FedEx
TRK# 0221 1891 8880 1588

THU – 03 DEC 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

December 28, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120449**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Influent Samples**

Dear Marcia Olive,

ALS Environmental received 1 sample(s) on Dec 09, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20120449

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120449-01	LH18/24-SP140_120820	Water		08-Dec-2020 14:00	09-Dec-2020 10:50	☐

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20120449

CASE NARRATIVE

Work Order Comments

- The analysis for Perchlorate was subcontracted our ALS Houston TX, High Resolution Lab. Final report attached.

Metals by Method SW6020

Batch ID: 160930

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Wet Chemistry by Method SW7196

Batch ID: R374281

Sample ID: LH18/24-SP140_120820 (HS20120449-01MS)

- MS recovered marginally outside control limits

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder:HS20120449
Sample ID: LH18/24-SP140_120820
Lab ID:HS20120449-01
Collection Date: 08-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	24-Dec-2020 11:17
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 11:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	09-Dec-2020 12:40
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 28-Dec-20

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20120449

Batch ID: 160930 **Start Date:** 21 Dec 2020 13:00 **End Date:** 21 Dec 2020 17:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120449-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20120449

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160930 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20120449-01	LH18/24-SP140_120820	08 Dec 2020 14:00		21 Dec 2020 17:00	24 Dec 2020 11:17	1
Batch ID: R374281 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20120449-01	LH18/24-SP140_120820	08 Dec 2020 14:00			09 Dec 2020 12:40	1
Batch ID: R375271 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20120449-01	LH18/24-SP140_120820	08 Dec 2020 14:00			23 Dec 2020 16:16	1

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20120449

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160930** Units: **mg/L** Analysis Date: **24-Dec-2020 10:49**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897738** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-160930** Units: **mg/L** Analysis Date: **24-Dec-2020 10:51**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897739** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05751	0.00500	0.05	0	115	80 - 120				
Silver	0.04736	0.00500	0.05	0	94.7	85 - 116				

MS Sample ID: **HS20120486-08MS** Units: **mg/L** Analysis Date: **24-Dec-2020 10:59**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897743** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05414	0.00500	0.05	-0.000434	109	80 - 120				
Silver	0.04515	0.00500	0.05	0.000029	90.2	85 - 116				

MSD Sample ID: **HS20120486-08MSD** Units: **mg/L** Analysis Date: **24-Dec-2020 11:15**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897749** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.0537	0.00500	0.05	-0.000434	108	80 - 120	0.05414	0.807	20	
Silver	0.04497	0.00500	0.05	0.000029	89.9	85 - 116	0.04515	0.408	20	

PDS Sample ID: **HS20120486-08PDS** Units: **mg/L** Analysis Date: **24-Dec-2020 11:03**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897745** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.1159	0.00500	0.1	-0.000434	116	80 - 120				
Silver	0.09472	0.00500	0.1	0.000029	94.7	80 - 120				

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20120449

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20120486-08SD** Units: **mg/L** Analysis Date: **24-Dec-2020 16:12**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5898069** PrepDate: **21-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Selenium	0.0125	0.0250					-0.000434	0	10	U
Silver	0.00250	0.0250					0.000029	0	10	U

The following samples were analyzed in this batch: HS20120449-01

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20120449

QC BATCH REPORT

Batch ID: R374281 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R374281** Units: **mg/L** Analysis Date: **09-Dec-2020 12:40**
Client ID: Run ID: **UV-2450_374281** SeqNo: **5871129** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R374281** Units: **mg/L** Analysis Date: **09-Dec-2020 12:40**
Client ID: Run ID: **UV-2450_374281** SeqNo: **5871128** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.245	0.0100	0.25	0	98.0	90 - 111				

MS Sample ID: **HS20120449-01MS** Units: **mg/L** Analysis Date: **09-Dec-2020 12:40**
Client ID: **LH18/24-SP140_120820** Run ID: **UV-2450_374281** SeqNo: **5871131** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.226	0.0100	0.25	0.001	90.0	90 - 111				S

MSD Sample ID: **HS20120449-01MSD** Units: **mg/L** Analysis Date: **09-Dec-2020 12:40**
Client ID: **LH18/24-SP140_120820** Run ID: **UV-2450_374281** SeqNo: **5871130** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.24	0.0100	0.25	0.001	95.6	90 - 111	0.226	6.01	20	

The following samples were analyzed in this batch: HS20120449-01

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: **HS20120449**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

ALS Houston, US Date: 28-Dec-20

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 28-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20120449

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120449-01	LH18/24-SP140_120820	Login	12/9/2020 11:49:50 AM	PMG	MET100
HS20120449-01	LH18/24-SP140_120820	Login	12/9/2020 11:49:50 AM	PMG	Sub
HS20120449-01	LH18/24-SP140_120820	Login	12/9/2020 11:49:50 AM	PMG	WET271

ALS Houston, US Date: 28-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120449 **Date/Time Received:** **09-Dec-2020 10:50**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Paresh M. Giga* (eSignature) 09-Dec-2020 11:51 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 09-Dec-2020 14:59 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.6C U/c	IR25	
Cooler(s)/Kit(s):	46339		
Date/Time sample(s) sent to storage:	12/9/2020 12:05		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: RJ Modashia

Page 1 of 1

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job:
GROUNDWATER TREATMENT PLANT MONTHLY INFLUENT SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20120449
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Influent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: SILVER & SELENIUM	HEXAVALENT CHROMIUM	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP140_120820	Water	12/08/20 / 14:00		1	X			HNO3	
LH18/24-SP140_120820	Water	12/08/20 / 14:00		2		X	X	NONE	

Additional Remarks: **STANDARD TURN AROUND TIME**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	12/08/20	14:30	JMPM 12-9-20		10:50						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

46739 3.6C IR25 CFC

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

01019313

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46339

CUSTODY SEAL

Date: 12/8/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 12109120

46339 DEC 0 9 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46339

ORIGIN ID:SGRA (309) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PH8202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09SEP20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: ADDITIONAL BOTTLES - BO 73689 - RJ

INV:
PO:

RT 917 1
B03 10:30

RMA:

FedEx Express

FedEx.
TRK# 0221 1891 8880 1544

WED - 09 DEC AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FTD: 162785 08Dec2020 GGGA 56DG2/9196/95A2

December 23, 2020 Service Request No:E2001210

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120449

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 09, 2020
For your reference, these analyses have been assigned our service request number **E2001210.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001210
Project:	HS20120449	**Date Received:**	12/09/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 12/09/20. The sample was received in good condition and is consistent with the accompanying chain of custody form.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000677: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS/DLCS RPD exceeded QC limits; the individual recoveries met acceptance criteria.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001210
Project: HS20120449

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001210-001	LH18/24-SP140_120820	12/8/2020	1400

Service Request Summary

Folder #: **E2001210**
Client Name: ALS Environmental - US
Project Name: HS20120449
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/09/20
Internal Due Date: 12/23/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120449
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 2B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001210-001	LH18/24-SP140_120820	Water	12/08/20 1400	IV

Service Request Summary

Folder #: **E2001210**
Client Name: ALS Environmental - US
Project Name: HS20120449
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
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Project Chemist: Corey Grandits
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QAP: LAB QAP
Qualifier Set: Lab Standard
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Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120449
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 2B
Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

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Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15296**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120449
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120449-01**	**LH18/24-SP140_120820**	**Water**	**08 Dec 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			23 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 12/9/2020

Received By: _____ Date/Time: 12/9/20 1800

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist: CH

Client/Project: ALS - H

Thermometer ID: 1231

Date/Time Received: 12/9/20 Initials: CH

Date/Time Logged in: 12/10/20 Initials: CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other _____

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other _____

5. Foreign or Regulated Soil? ○ Yes ✓ No Location of Sampling: _____

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/9/20	1000	CH	1.4	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001208-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001209-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001210-001	LH18/24-SP140_120820	.01	6850/ClO4 DOD			Water	10mL	
4	E2001211-001	MW5_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001211-002	18CPTMW08DW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001211-003	18CPTMW08SW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001211-004	18CPTMW08SW_120820_a	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001211-005	MW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001211-006	MW16_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001211-007	18CPTMW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001211-008	18WW24_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001211-009	18CTPMW15_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001217-001	18CPTMW04_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001217-002	18CPTMW04SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001217-003	AWD3_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001217-004	AWD3_120920_a	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001217-005	MW10_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001217-006	18CPTMW12SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2001217-007	18CPTMW12DW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2001217-008	MW7_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2000677-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000677-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2000677-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000677-02 1.00µL EQ2000677-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001208-001	100.00µL	E2001209-001	100.00µL	E2001210-001	100.00µL	E2001211-001	100.00µL	E2001211-002	100.00µL	E2001211-003	100.00µL
E2001211-004	100.00µL	E2001211-005	100.00µL	E2001211-006	100.00µL	E2001211-007	100.00µL	E2001211-008	100.00µL	E2001211-009	100.00µL
E2001217-001	100.00µL	E2001217-002	100.00µL	E2001217-003	100.00µL	E2001217-004	100.00µL	E2001217-005	100.00µL	E2001217-006	100.00µL
E2001217-007	100.00µL	E2001217-008	100.00µL	EQ2000677-01	100.00µL	EQ2000677-02	100.00µL	EQ2000677-03	100.00µL		

Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

Preparation Steps

Step: Preparation
Started: 12/15/20 08:58
Finished: 12/15/20 11:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/15/20

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001210
Project:	HS20120449	**Date Collected:**	12/ 8/20 1400
Sample Matrix:	Water	**Date Received:**	12/ 9/20
Sample Name:	LH18/24-SP140_120820	**Units:**	µg/L
Lab Code:	E2001210-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**7770**		20.0	10.0	5.00	200	12/15/20	12/21/20 10:15	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001210
Project:	HS20120449	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000677-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/15/20	12/22/20 17:46	371505	708075	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20120449
Sample Matrix: Water

Service Request: E2001210
Date Analyzed: 12/22/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371505

	Lab Control Sample EQ2000677-02			Duplicate Lab Control Sample EQ2000677-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.104	0.100	104	0.0873	0.100	87	84 - 119	17 *	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001210
Project:	HS20120449	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.104**		0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:07	371505	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001210
Project:	HS20120449	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0873**	J	0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:15	371505	708075	

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Houston, TX 77099
T: +1 281 530 5656
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December 23, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120450**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Dec 09, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120450

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120450-01	LH18/24-SP650_120820	Water		08-Dec-2020 14:00	09-Dec-2020 10:50	☐
HS20120450-02	LH18/24-SP650_120820-BIX	Water		08-Dec-2020 14:00	09-Dec-2020 10:50	☐

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120450

Work Order Comments

• The analysis for Perchlorate was subcontracted our ALS Houston TX, High Resolution Lab. Final report attached.

The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

WetChemistry by Method E350.3

Batch ID: R375197

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R374291

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20120450
Sample ID: LH18/24-SP650_120820
Lab ID:HS20120450-01
Collection Date: 08-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: YP
Nitrogen, Ammonia (As N)	**7.4**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	17-Dec-2020 09:57
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.07**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	09-Dec-2020 15:12
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	22-Dec-2020 13:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20120450
Sample ID: LH18/24-SP650_120820-BIX
Lab ID:HS20120450-02
Collection Date: 08-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120450

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R374291 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20120450-01	LH18/24-SP650_120820	08 Dec 2020 14:00			09 Dec 2020 15:12	10
Batch ID: R375125 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20120450-01	LH18/24-SP650_120820	08 Dec 2020 14:00			22 Dec 2020 13:05	1
Batch ID: R375197 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20120450-01	LH18/24-SP650_120820	08 Dec 2020 14:00			17 Dec 2020 09:57	1
Batch ID: R375271 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20120450-02	LH18/24-SP650_120820-BIX	08 Dec 2020 14:00			23 Dec 2020 16:16	1

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120450

QC BATCH REPORT

Batch ID: R374291 (0) **Instrument: UV-2450** **Method: ORTHO PHOSPHATE (PO4) AS P BY E365.3**

MBLK Sample ID: **MBLK-R374291** Units: **mg/L** Analysis Date: **09-Dec-2020 15:12**
Client ID: Run ID: **UV-2450_374291** SeqNo: **5871254** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-R374291** Units: **mg/L** Analysis Date: **09-Dec-2020 15:12**
Client ID: Run ID: **UV-2450_374291** SeqNo: **5871253** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.249	0.0250	0.25	0	99.6	85 - 115				

MS Sample ID: **HS20120459-01MS** Units: **mg/L** Analysis Date: **09-Dec-2020 15:12**
Client ID: Run ID: **UV-2450_374291** SeqNo: **5871256** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.258	0.0250	0.25	0.038	88.0	80 - 120				

MSD Sample ID: **HS20120459-01MSD** Units: **mg/L** Analysis Date: **09-Dec-2020 15:12**
Client ID: Run ID: **UV-2450_374291** SeqNo: **5871255** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.259	0.0250	0.25	0.038	88.4	80 - 120	0.258	0.387	20	

The following samples were analyzed in this batch: HS20120450-01

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120450

QC BATCH REPORT

Batch ID: R375197 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R375197** Units: **mg/L** Analysis Date: **17-Dec-2020 09:57**
Client ID: Run ID: **WetChem_HS_375197** SeqNo: **5894359** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-R375197** Units: **mg/L** Analysis Date: **17-Dec-2020 09:57**
Client ID: Run ID: **WetChem_HS_375197** SeqNo: **5894358** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	9.987	0.20	10	0	99.9	85 - 115				

LCSD Sample ID: **LCSD-R375197** Units: **mg/L** Analysis Date: **17-Dec-2020 09:57**
Client ID: Run ID: **WetChem_HS_375197** SeqNo: **5894357** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.47	0.20	10	0	105	85 - 115	9.987	4.71	20	

MS Sample ID: **HS20120380-01MS** Units: **mg/L** Analysis Date: **17-Dec-2020 09:57**
Client ID: Run ID: **WetChem_HS_375197** SeqNo: **5894361** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	9.74	0.20	10	0.25	94.9	80 - 120				

MSD Sample ID: **HS20120380-01MSD** Units: **mg/L** Analysis Date: **17-Dec-2020 09:57**
Client ID: Run ID: **WetChem_HS_375197** SeqNo: **5894360** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	9.981	0.20	10	0.25	97.3	80 - 120	9.74	2.44	20	

The following samples were analyzed in this batch: HS20120450-01

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20120450**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120450

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120450-01	LH18/24-SP650_120820	Login	12/9/2020 12:03:14 PM	PMG	WET225
HS20120450-01	LH18/24-SP650_120820	Login	12/9/2020 12:03:14 PM	PMG	WET225
HS20120450-01	LH18/24-SP650_120820	Login	12/9/2020 12:03:14 PM	PMG	Sub
HS20120450-02	LH18/24-SP650_120820-BIX	Login	12/9/2020 12:03:14 PM	PMG	Sub

ALS Houston, US Date: 23-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120450 **Date/Time Received:** **09-Dec-2020 10:50**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Paresh M. Giga* (eSignature) 09-Dec-2020 12:05 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 09-Dec-2020 14:58 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.6C U/c	IR25	
Cooler(s)/Kit(s):	46339		
Date/Time sample(s) sent to storage:	12/9/2020 12:15		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20120450
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_120820	Water	12/08/20 / 14:00		2	X	X			H2SO4	
LH18/24-SP650_120820	Water	12/08/20 / 14:00		1			X		NONE	
LH18/24-SP650_120820_BIX	Water	12/08/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	12/08/20	14:30	JM PM 12.9.20		10:50						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

46339 3.6C IR25 cfo

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46339

CUSTODY SEAL

Date: 12/8/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 12109120

46339 DEC 0 9 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46339

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09SEP20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656

REF 917 1
PO B03
10:30

REF: ADDITIONAL BOTTLES - BO 73689 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1544

WED - 09 DEC AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FID: 162785 08Dec2020 GGGA 56DG2/9196/0587

December 23, 2020 Service Request No:E2001209

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120450

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 09, 2020
For your reference, these analyses have been assigned our service request number **E2001209.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001209
Project:	HS20120450	**Date Received:**	12/09/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 12/09/20. The sample was received in good condition and is consistent with the accompanying chain of custody form.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000677: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS/DLCS RPD exceeded QC limits; the individual recoveries met acceptance criteria.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001209
Project: HS20120450

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001209-001	LH18/24-SP650_120820_BIX	12/8/2020	1400

Service Request Summary

Folder #: **E2001209**
Client Name: ALS Environmental - US
Project Name: HS20120450
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/09/20
Internal Due Date: 12/23/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120450
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 2B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001209-001	LH18/24-SP650_120820_BIX	Water	12/08/20 1400	**IV**

Service Request Summary

Folder #:	**E2001209**
Client Name:	ALS Environmental - US
Project Name:	HS20120450
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	12/09/20
Internal Due Date:	12/23/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20120450
EDD:	No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved

Location: EHRMS-WIC 2B

Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15298**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120450
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120450-02**	**LH18/24-SP650_120220-BIX**	**Water**	**08 Dec 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			23 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 12/9/2020

Received By: _____ Date/Time: 12/9/20 1800

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist: CH

Client/Project: ALS - H

Thermometer ID: 1231

Date/Time Received: 12/9/20 Initials: CH

Date/Time Logged in: 12/10/20 Initials: CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ✓ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/9/20	1000	CH	1.4	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001208-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001209-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001210-001	LH18/24-SP140_120820	.01	6850/ClO4 DOD			Water	10mL	
4	E2001211-001	MW5_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001211-002	18CPTMW08DW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001211-003	18CPTMW08SW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001211-004	18CPTMW08SW_120820_a	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001211-005	MW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001211-006	MW16_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001211-007	18CPTMW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001211-008	18WW24_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001211-009	18CTPMW15_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001217-001	18CPTMW04_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001217-002	18CPTMW04SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001217-003	AWD3_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001217-004	AWD3_120920_a	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001217-005	MW10_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001217-006	18CPTMW12SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2001217-007	18CPTMW12DW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2001217-008	MW7_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2000677-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000677-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2000677-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000677-02 1.00µL EQ2000677-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001208-001	100.00µL	E2001209-001	100.00µL	E2001210-001	100.00µL	E2001211-001	100.00µL	E2001211-002	100.00µL	E2001211-003	100.00µL
E2001211-004	100.00µL	E2001211-005	100.00µL	E2001211-006	100.00µL	E2001211-007	100.00µL	E2001211-008	100.00µL	E2001211-009	100.00µL
E2001217-001	100.00µL	E2001217-002	100.00µL	E2001217-003	100.00µL	E2001217-004	100.00µL	E2001217-005	100.00µL	E2001217-006	100.00µL
E2001217-007	100.00µL	E2001217-008	100.00µL	EQ2000677-01	100.00µL	EQ2000677-02	100.00µL	EQ2000677-03	100.00µL		

Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

Preparation Steps

Step: Preparation
Started: 12/15/20 08:58
Finished: 12/15/20 11:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/15/20

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001209
Project:	HS20120450	**Date Collected:**	12/ 8/20 1400
Sample Matrix:	Water	**Date Received:**	12/ 9/20
Sample Name:	LH18/24-SP650_120820_BIX	**Units:**	µg/L
Lab Code:	E2001209-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	12/15/20	12/21/20 10:07	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001209
Project:	HS20120450	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000677-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/15/20	12/22/20 17:46	371505	708075	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001209
Project:	HS20120450	**Date Analyzed:**	12/22/20
Sample Matrix:	Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	371505

	Lab Control Sample EQ2000677-02			Duplicate Lab Control Sample EQ2000677-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.104	0.100	104	0.0873	0.100	87	84 - 119	17 *	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001209
Project:	HS20120450	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.104**		0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:07	371505	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001209
Project:	HS20120450	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0873**	J	0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:15	371505	708075	

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www.alsglobal.com

December 22, 2020 **Analytical Report for Service Request No:** K2011577

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20120450

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 10, 2020
For your reference, these analyses have been assigned our service request number **K2011577.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20120450
Sample Matrix: Water

Service Request: K2011577
Date Received: 12/10/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 12/10/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by _____ Date 12/22/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

Subcontract Chain of Custody

KJ011577

SAMPLING STATE: **Dept of Defense** **COC ID:** **15297**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120450
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120450-01**	**LH18/24-SP650_120820**	**Water**	**08 Dec 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			23 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: [signature] Date/Time: 12/9/2020 1800.

Received By: K Marrow ALS Kelso Date/Time: 12/10/20 10:10

Cooler ID(s): _____ Temperature(s): _____

PM Kelly

Cooler Receipt and Preservation Form

Client ALS Houston Service Request K20 11577

Received: 12/10/20 Opened: 12/10/20 By: [illegible] Unloaded: 12/10/20 By: [illegible]

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below.
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
1.8	—	IR02	15297	—	—	526566013216	

6. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2011577
Project:	HS20120450	**Date Collected:**	12/8/20
Sample Matrix:	Water	**Date Received:**	12/10/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_120820	K2011577-001	**1.15**	0.50	0.20	0.07	1	12/17/20 18:43	
Method Blank	K2011577-MB	ND U	0.50	0.20	0.07	1	12/17/20 18:43	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2011577
Project:	HS20120450	**Date Analyzed:**	12/17/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	707530

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2011577-LCS	23.6	25.0	95	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2011577
Project: HS20120450

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	707530	KQ2020442-01	12/17/20 18:43	25.0	25.3	101	90-110
CCV2	707530	KQ2020442-02	12/17/20 18:43	25.0	25.2	101	90-110
CCV3	707530	KQ2020442-03	12/17/20 18:43	25.0	24.7	99	90-110
CCV4	707530	KQ2020442-04	12/17/20 18:43	25.0	25.0	100	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2011577
Project: HS20120450

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	707530	KQ2020442-05	12/17/20 18:43	0.50	0.20	0.07	ND	U
CCB2	707530	KQ2020442-06	12/17/20 18:43	0.50	0.20	0.07	ND	U
CCB3	707530	KQ2020442-07	12/17/20 18:43	0.50	0.20	0.07	ND	U
CCB4	707530	KQ2020442-08	12/17/20 18:43	0.50	0.20	0.07	ND	U

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2011577
Project:	HS20120450	**Date Collected:**	12/8/20
Sample Matrix:	Water	**Date Received:**	12/10/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_120820	K2011577-001	**1.15**	0.50	0.20	0.07	1	12/17/20 18:43	
Method Blank	K2011577-MB	ND U	0.50	0.20	0.07	1	12/17/20 18:43	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2011577
Project:	HS20120450	**Date Analyzed:**	12/17/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	707530

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2011577-LCS	23.6	25.0	95	83-117

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

Work Request # Original ( ) K2011385, 1430, 1577, 1788, 1808, 1817

Tier: I IV IV I II I

Date Analyzed: 12/17/20

Analyst: MAS Run # 707530

Analysis: SM 5310 C/TOCT

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	(yes)/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	(yes)/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
9.	Are results for methods blanks all ND?	(yes)/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/(no)/NA
11.	Are all exceptions explained?	(yes)/no/NA
12.	Have all applicable service requests been reviewed?	(yes)/no/NA
13.	Are all samples labeled correctly?	(yes)/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	(yes)/no/NA
15.	Are detection limits and units reported correctly?	(yes)/no/NA
16.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/(no)/NA

COMMENTS:

- Matrix interference on the matrix spike

Final Approved by: [signature] Date: 12/18/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MSPECHT **Analysis Lot:** 707530 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2011385-001	Carbon, Total Organic	N/A		Water	8.68 mg/L	10 mL	8.68 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011385-002	Carbon, Total Organic	N/A		Water	11.84 mg/L	10 mL	11.8 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011385-003	Carbon, Total Organic	N/A		Water	1.52 mg/L	10 mL	1.52 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011385-004	Carbon, Total Organic	N/A		Water	17.59 mg/L	10 mL	17.6 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011385-005	Carbon, Total Organic	N/A		Water	7.26 mg/L	10 mL	7.26 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011385-006	Carbon, Total Organic	N/A		Water	20.51 mg/L	10 mL	20.5 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011385-007	Carbon, Total Organic	N/A		Water	15.94 mg/L	10 mL	15.9 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011385-008	Carbon, Total Organic	N/A		Water	9.04 mg/L	10 mL	9.04 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011385-009	Carbon, Total Organic	N/A		Water	20.10 mg/L	10 mL	20.1 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011430-001	Carbon, Total Organic	N/A		Ground Water	11.99 mg/L	10 mL	12.0 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	IV
K2011430-002	Carbon, Total Organic	N/A		Ground Water	2.33 mg/L	10 mL	2.33 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	IV
K2011430-003	Carbon, Total Organic	N/A		Ground Water	21.37 mg/L	10 mL	21.4 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	IV
K2011430-004	Carbon, Total Organic	N/A		Ground Water	1.63 mg/L	10 mL	1.63 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	IV
K2011577-001	Carbon, Total Organic	N/A		Water	1.15 mg/L	10 mL	1.15 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	IV
K2011788-001	Carbon, Total Organic	N/A		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011788-002	Carbon, Total Organic	N/A		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/17/20 18:43:00	N	I
K2011808-001	Carbon, Total Organic	N/A		Water	0.94 mg/L	10 mL	0.94 mg/L	1	0.07	0.50			12/17/20 18:43:00	N	II
K2011817-001	Carbon, Total Organic	N/A		Water	11.39 mg/L	10 mL	228 mg/L	20	2	10			12/17/20 18:43:00	N	I
KQ2020442-01	Carbon, Total Organic	CCV		Reagent Water	25.26 mg/L	10 mL	25.3 mg/L	1					12/17/20 18:43:00	N	I
KQ2020442-02	Carbon, Total Organic	CCV		Reagent Water	25.21 mg/L	10 mL	25.2 mg/L	1					12/17/20 18:43:00	N	I
KQ2020442-03	Carbon, Total Organic	CCV		Reagent Water	24.71 mg/L	10 mL	24.7 mg/L	1					12/17/20 18:43:00	N	I
KQ2020442-04	Carbon, Total Organic	CCV		Reagent Water	24.96 mg/L	10 mL	25.0 mg/L	1					12/17/20 18:43:00	N	I
KQ2020442-05	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/17/20 18:43:00	N	I
KQ2020442-06	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/17/20 18:43:00	N	I
KQ2020442-07	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/17/20 18:43:00	N	I
KQ2020442-08	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/17/20 18:43:00	N	I
KQ2020442-09	Carbon, Total Organic	MB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			12/17/20 18:43:00	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** MSPECHT **Analysis Lot:** 707530 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2020442-10	Carbon, Total Organic	LCS		Reagent Water	23.64 mg/L	10 mL	23.6 mg/L	1	0.07	0.50	95		12/17/20 18:43:00	N	I
KQ2020442-11	Carbon, Total Organic	MS	K2011430-001	Ground Water	31.67 mg/L	10 mL	31.7 mg/L	1	0.07	0.50	79*		12/17/20 18:43:00	N	IV
KQ2020442-12	Carbon, Total Organic	DUP	K2011430-001	Ground Water	12.31 mg/L	10 mL	12.3 mg/L	1	0.07	0.50		3	12/17/20 18:43:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Schedule: 12172020

Version: 4
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/12/18 14:10 - Friday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
A	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
A	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	LOD	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	LOQ	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2011788-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2011788-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2011430-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2011430-001 DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2011430-001 MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
A	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2011430-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2011430-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2011430-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2011385-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2011385-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2011385-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2011385-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2011385-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2011385-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2011385-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
A	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2011385-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2011385-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2011577-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2011817-001 20X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2011808-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2010984-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2010984-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2011175-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
29	Sample	K2011175-001 DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2011175-001 MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2011175-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	K2011175-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
A	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
33	Sample	K2011175-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2011175-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	LOD .32	CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
36	Sample	LOQ 1.0	CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
37	Sample	K2011175-005 2X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
39	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready

Schedule: 12172020

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
40	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
41	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
A	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 12172020
Thursday, December 17, 2020 06:42 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/12/18 15:14 - Friday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	12172020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1) Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v3) Fusion1 (Fusion1) (v4)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
*	(clean)		Clean	2020/12/17 18:43

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.76	27.47	14.71	49.44	05:26
2	TC Clean	5.96	19.23	13.28	50.45	04:03
3	TC Clean	1.44	14.72	13.29	50.62	03:49
4	TC Clean	1.16	14.45	13.29	50.37	04:00

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
*	(clean)		Clean	2020/12/17 19:05

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.34	12.85	13.18	49.85	05:26
2	TC Clean	4.17	17.14	12.97	50.60	04:02
3	TC Clean	0.84	13.90	13.07	50.60	03:48

4	TC Clean	0.61	13.85	13.25	50.18	03:47

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
*	(clean)		Clean	2020/12/17 19:27

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.52	12.56	13.08	49.36	05:13
2	TC Clean	3.62	16.83	13.21	50.28	04:06
3	TC Clean	0.87	14.13	13.26	50.33	03:50
4	TC Clean	0.92	14.09	13.18	50.57	03:48

Sample Type: Blank (Creating v1496) From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
*	(blank)		Reagent/Acid Blank	2020/12/17 19:48

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.34	12.83	13.17	49.69	05:12
2	TC Clean	3.47	16.83	13.35	50.48	04:05
3	TC Clean	1.49	14.72	13.23	50.63	03:50
4	TC Clean	0.85	14.29	13.44	50.35	03:52
5	Reagent Blank	5.17	18.63	13.45	50.56	05:08
6	Acid Blank	-0.05	13.12	13.17	49.40	05:31

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
*	A	TOC	RB	0.0087 ppm	0.0000 ppm	0.0000%	2020/12/17 20:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0087	0.0874	9.31	22.61	13.30	51.10	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2639 ppm (PASS)	0.0000 ppm	0%	2020/12/17 20:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2639	252.6391	187.11	200.39	13.28	51.11	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	A	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/17 20:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
A	TOC	0 ppm	1	0.0000	0.0000	7.44	20.92	13.47	51.11	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos A
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	ICS	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/17 21:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.17	22.29	13.12	51.13	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/17 21:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.49	19.89	13.40	51.14	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.6432 ppm (PASS)	0.0000 ppm	0%	2020/12/17 21:35

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.6432	236.4320	175.74	188.89	13.15	51.14	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	LOD	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/17 21:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.33	21.47	13.14	51.15	10:30
2	TOC	0.0000	0.0000	7.56	20.98	13.41	51.17	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	LOQ	0.1353 ppm	0.0257 ppm	19.0000%	2020/12/17 22:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1171	1.1708	10.07	23.37	13.30	51.17	10:26
2	TOC	0.1534	1.5343	10.32	23.42	13.10	51.18	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2011788-001	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/17 22:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.30	19.58	13.29	51.17	10:26

2	TOC	0.0000	0.0000	6.05	19.48	13.43	51.18	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2011788-002	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/17 23:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.90	19.33	13.43	51.17	10:26
2	TOC	0.0000	0.0000	6.11	19.40	13.29	51.16	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2011430-001	11.9856 ppm	0.3650 ppm	3.0500%	2020/12/17 23:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	12.2437	122.4368	95.14	108.49	13.35	51.15	10:27
2	TOC	11.7275	117.2749	91.51	104.87	13.36	51.15	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2011430-001 DUP	12.3112 ppm	0.4172 ppm	3.3900%	2020/12/18 00:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	12.6062	126.0620	97.68	110.99	13.32	51.16	10:30
2	TOC	12.0162	120.1616	93.54	106.87	13.33	51.15	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2011430-001 MS	31.6722 ppm	0.2403 ppm	0.7600%	2020/12/18 00:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	31.8422	318.4217	232.62	245.89	13.28	51.16	10:28
2	TOC	31.5023	315.0232	230.23	243.62	13.38	51.17	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2089 ppm (PASS)	0.0000 ppm	0%	2020/12/18 01:06

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2089	252.0888	186.73	200.18	13.45	51.15	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	A	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/18 01:21

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
A	TOC	0 ppm	1	0.0000	0.0000	7.17	20.59	13.43	51.16	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos A
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2011430-002	2.3330 ppm	0.0922 ppm	3.9500%	2020/12/18 01:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3982	23.9825	26.07	39.32	13.24	51.17	10:27
2	TOC	2.2678	22.6781	25.16	38.54	13.38	51.17	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2011430-003	21.3688 ppm	0.4943 ppm	2.3100%	2020/12/18 02:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.7183	217.1833	161.60	174.92	13.32	51.18	10:26
2	TOC	21.0192	210.1923	156.69	170.15	13.45	51.17	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2011430-004	1.6262 ppm	0.2489 ppm	15.3000%	2020/12/18 02:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8022	18.0222	21.89	35.50	13.61	51.19	10:27
2	TOC	1.4503	14.5025	19.42	32.77	13.35	51.19	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2011385-001	8.6831 ppm	0.0762 ppm	0.8800%	2020/12/18 03:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.7370	87.3696	70.54	83.96	13.42	51.20	10:29
2	TOC	8.6292	86.2919	69.78	83.37	13.59	51.20	10:22

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2011385-002	11.8395 ppm	0.1459 ppm	1.2300%	2020/12/18 03:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	11.9426	119.4260	93.02	106.43	13.41	51.22	10:29
2	TOC	11.7363	117.3633	91.58	105.12	13.55	51.21	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2011385-003	1.5159 ppm	0.1184 ppm	7.8100%	2020/12/18 03:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5997	15.9965	20.47	33.84	13.37	51.22	10:27
2	TOC	1.4322	14.3215	19.29	32.62	13.32	51.22	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2011385-004	17.5889 ppm	0.0029 ppm	0.0200%	2020/12/18 04:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	17.5868	175.8679	132.62	146.14	13.52	51.22	10:30
2	TOC	17.5909	175.9092	132.65	146.11	13.46	51.22	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2011385-005	7.2554 ppm	0.3085 ppm	4.2500%	2020/12/18 04:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.4735	74.7350	61.67	75.19	13.51	51.21	10:26
2	TOC	7.0373	70.3728	58.61	72.36	13.74	51.21	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2011385-006	20.5115 ppm	0.5545 ppm	2.7000%	2020/12/18 05:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	20.9036	209.0362	155.88	169.56	13.68	51.21	10:29
2	TOC	20.1194	201.1943	150.38	163.92	13.54	51.22	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2011385-007	15.9449 ppm	0.3513 ppm	2.2000%	2020/12/18 05:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	16.1933	161.9331	122.84	136.36	13.51	51.19	10:25
2	TOC	15.6965	156.9651	119.36	132.82	13.46	51.15	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.7068 ppm (PASS)	0.0000 ppm	0%	2020/12/18 06:16

Pos	Base Analysis	ID	Rep	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run

	Type		#							Time
B	TOC	25 ppm	1	24.7068	247.0680	183.21	196.66	13.45	51.16	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	A	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/18 06:31

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
A	TOC	0 ppm	1	0.0000	0.0000	6.96	20.41	13.45	51.12	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos A
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/12/18 06:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.15	19.39	13.24	51.12	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.1999 ppm (PASS)	0.0000 ppm	0%	2020/12/18 07:00

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.1999	231.9985	172.64	185.92	13.28	51.07	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2011385-008	9.0350 ppm	0.4155 ppm	4.6000%	2020/12/18 07:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	9.3289	93.2885	74.69	87.95	13.26	51.11	10:28
2	TOC	8.7412	87.4124	70.57	83.77	13.20	51.09	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2011385-009	20.0997 ppm	0.4213 ppm	2.1000%	2020/12/18 07:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	20.3976	203.9755	152.33	165.63	13.30	51.12	10:31
2	TOC	19.8018	198.0181	148.15	161.41	13.26	51.10	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2011577-001	1.1495 ppm	0.0643 ppm	5.5900%	2020/12/18 08:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1949	11.9494	17.63	31.10	13.47	51.12	10:29
2	TOC	1.1040	11.0399	16.99	30.28	13.29	51.10	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2011817-001 20X	11.3898 ppm	0.1935 ppm	1.7000%	2020/12/18 08:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	11.5266	115.2663	90.10	103.53	13.43	51.04	10:28
2	TOC	11.2529	112.5292	88.18	101.44	13.25	51.05	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2011808-001	0.9356 ppm	0.1962 ppm	20.9700%	2020/12/18 09:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	1.0743	10.7434	16.78	30.09	13.30	51.02	10:26
2	TOC	0.7969	7.9692	14.84	27.97	13.14	51.02	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2010984-001	25.6486 ppm	0.0090 ppm	0.0300%	2020/12/18 09:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.6423	256.4230	189.12	202.11	12.99	51.00	10:29
2	TOC	25.6550	256.5499	189.21	202.25	13.03	50.97	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2010984-002	6.8444 ppm	0.1189 ppm	1.7400%	2020/12/18 10:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	6.9285	69.2851	57.85	70.77	12.92	50.97	10:24
2	TOC	6.7603	67.6029	56.67	69.66	12.99	50.96	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2011175-001	0.2122 ppm	0.0423 ppm	19.9500%	2020/12/18 10:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2421	2.4210	10.95	23.94	12.99	50.98	10:30
2	TOC	0.1822	1.8223	10.53	23.42	12.90	50.99	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2011175-001 DUP	0.2859 ppm	0.0093 ppm	3.2400%	2020/12/18 10:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2793	2.7931	11.21	24.29	13.08	50.99	10:29
2	TOC	0.2924	2.9242	11.30	24.28	12.98	50.97	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2011175-001 MS	26.2400 ppm	0.2296 ppm	0.8800%	2020/12/18 11:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	26.0777	260.7766	192.18	205.21	13.03	50.95	10:28
2	TOC	26.4024	264.0240	194.46	207.45	13.00	50.94	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2011175-002	0.2374 ppm	0.0502 ppm	21.1500%	2020/12/18 11:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2729	2.7289	11.16	24.12	12.96	50.97	10:28
2	TOC	0.2019	2.0190	10.66	23.66	12.99	50.95	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	K2011175-003	0.0958 ppm	0.0256 ppm	26.7200%	2020/12/18 12:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1139	1.1394	10.05	22.96	12.92	50.93	10:29
2	TOC	0.0777	0.7773	9.79	22.74	12.95	50.91	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.9570 ppm (PASS)	0.0000 ppm	0%	2020/12/18 12:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.9570	249.5699	184.96	197.82	12.86	50.91	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria	Do Nothing	CAS_salt_010711	CAS_salt_010711	50 ppmC

met.	(v4)	(v38)

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	A	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/18 13:05

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
A	TOC	0 ppm	1	0.0000	0.0000	6.55	19.45	12.91	50.87	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos A
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	33	TOC	K2011175-004	1.7411 ppm	0.0523 ppm	3.0000%	2020/12/18 13:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7041	17.0415	21.20	34.18	12.97	50.90	10:28
2	TOC	1.7781	17.7813	21.72	34.32	12.60	50.90	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	34	TOC	K2011175-005	62.2494 ppm	0.4210 ppm	0.6800%	2020/12/18 13:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	62.5471	625.4713	448.00	460.76	12.76	50.88	10:28
2	TOC	61.9517	619.5168	443.83	456.72	12.89	50.86	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆ 37	TOC	K2011175-005 2X	36.3601 ppm	0.1854 ppm	0.5100%	2020/12/18 14:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	36.2290	362.2902	263.39	276.25	12.86	50.84	10:28
2	TOC	36.4912	364.9118	265.23	277.94	12.71	50.84	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2477 (IC) (v1496)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.6777 ppm (PASS)	0.0000 ppm	0%	2020/12/18 14:44

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.6777	256.7775	190.02	202.50	12.48	50.82	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	A	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/12/18 14:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
A	TOC	0 ppm	1	0.0000	0.0000	7.57	20.20	12.62	50.83	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos A
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator

v1495	1.8497	-0.0560	0.0000	0.0000	0.0000	2020/12/16 11:47	Fusion1 (Fusion1)
v1496	1.7243	-0.0480	0.0000	0.0000	0.0000	2020/12/17 20:22	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version: v38
Ver Creation: 2020/06/13 16:40
Comment:
Operator: Fusion1 (Fusion1)
Basic Analysis Type: TOC
Calibration curve formula: TOC: y = 7.015x + 9.892
r^2 value: TOC: r^2 = 0.99974

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25
50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version: v4
Ver Creation: 2019/02/21 17:57
Comment:
Operator: Fusion1 (Fusion1)

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5

SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/12/18 15:14

ALS Environmental

StarLIMS Run: 707530

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-55J 50 ppm LCS: 19-GEN-8-57K 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-58F

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-55I 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-61M

21 % H3PO4: 19-GEN-08-61L

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MAS	Date Analyzed: 12/17/2020
Reviewed By:	Date Reviewed: 12/18/20

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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December 29, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120455**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Dec 09, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20120455

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120455-01	LH18/24-SP650_120820	Water		08-Dec-2020 14:00	09-Dec-2020 10:50	☐
HS20120455-02	LH18/24-SP650_120820_BIX	Water		08-Dec-2020 14:00	09-Dec-2020 10:50	☐
HS20120455-03	Trip Blank	Water	CG-102720-260	08-Dec-2020 00:00	09-Dec-2020 10:50	☐

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20120455

Work Order Comments

• The analysis for Perchlorate was subcontracted our ALS Houston TX, High Resolution Lab. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160571

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R375002

Sample ID: CCV

• 1,2-Dibromo-3-Chloropropane exceeded %D limits for CCV. Samples are ND for this compound.

Sample ID: VLCSW-201218

• 1,2,3-Trichlorobenzene exceeded QC limits for LCS. Samples are ND for this compound.

Metals by Method SW6020

Batch ID: 160930

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Wet Chemistry by Method SW7196

Batch ID: R374281

Sample ID: HS20120449-01MS

• MS is for an unrelated sample

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20120455
Sample ID: LH18/24-SP650_120820 Lab ID:HS20120455-01
Collection Date: 08-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:11
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:11
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:11
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:11
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:11
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:11
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:11
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:11
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 14:11
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:11
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 14:11
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:11
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:11
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 14:11
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 14:11
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:11
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 14:11
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20120455
Sample ID: LH18/24-SP650_120820 Lab ID:HS20120455-01
Collection Date: 08-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
cis-1,2-Dichloroethene	**6.9**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 14:11
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:11
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:11
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 14:11
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 14:11
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 14:11
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:11
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Trichloroethene	**2.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 14:11
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:11
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:11
Surr: 1,2-Dichloroethane-d4	*90.5*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 14:11*
Surr: 4-Bromofluorobenzene	*92.0*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 14:11*
Surr: Dibromofluoromethane	*88.2*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 14:11*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 14:11*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**1.3**	a	**0.10**	**0.10**	**0.10**	**ug/L**	10	14-Dec-2020 13:35
Surr: 2-Fluorobiphenyl	*128*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 13:35*
Surr: 4-Terphenyl-d14	*110*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 13:35*
Surr: Nitrobenzene-d5	*128*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 13:35*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Barium	**0.343**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:19
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:19
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	24-Dec-2020 11:19
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 11:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20120455

Sample ID: LH18/24-SP650_120820 Lab ID:HS20120455-01

Collection Date: 08-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	09-Dec-2020 12:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20120455

Sample ID: LH18/24-SP650_120820_BIX Lab ID:HS20120455-02

Collection Date: 08-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20120455

Sample ID: Trip Blank Lab ID:HS20120455-03

Collection Date: 08-Dec-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 13:50
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 13:50
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 13:50
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 13:50
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 13:50
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 13:50
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 13:50
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 13:50
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 13:50
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 13:50
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 13:50
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 13:50
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 13:50
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20120455

Sample ID: Trip Blank Lab ID:HS20120455-03

Collection Date: 08-Dec-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 13:50
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 13:50
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 13:50
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 13:50
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 13:50
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 13:50
Surr: 1,2-Dichloroethane-d4	*88.6*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 13:50*
Surr: 4-Bromofluorobenzene	*93.4*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 13:50*
Surr: Dibromofluoromethane	*88.3*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 13:50*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 13:50*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

Batch ID: 160571 **Start Date:** 10 Dec 2020 10:30 **End Date:** 10 Dec 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120455-01	1	1000 (mL)	1 (mL)	0.001

Batch ID: 160930 **Start Date:** 21 Dec 2020 13:00 **End Date:** 21 Dec 2020 17:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120455-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160571 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20120455-01	LH18/24-SP650_120820	08 Dec 2020 14:00		10 Dec 2020 13:05	14 Dec 2020 13:35	10
Batch ID: 160930 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20120455-01	LH18/24-SP650_120820	08 Dec 2020 14:00		21 Dec 2020 17:00	24 Dec 2020 11:19	1
Batch ID: R374281 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20120455-01	LH18/24-SP650_120820	08 Dec 2020 14:00			09 Dec 2020 12:40	1
Batch ID: R375002 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120455-01	LH18/24-SP650_120820	08 Dec 2020 14:00			18 Dec 2020 14:11	1
HS20120455-03	Trip Blank	08 Dec 2020 00:00			18 Dec 2020 13:50	1
Batch ID: R375271 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20120455-02	LH18/24-SP650_120820_BIX	08 Dec 2020 14:00			23 Dec 2020 16:16	1

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160930** Units: **mg/L** Analysis Date: **24-Dec-2020 10:49**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897738** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.00250	0.00500								U
Lead	0.00100	0.00500								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-160930** Units: **mg/L** Analysis Date: **24-Dec-2020 10:51**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897739** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.047	0.00500	0.05	0	94.0	86 - 114				
Lead	0.04482	0.00500	0.05	0	89.6	88 - 115				
Selenium	0.05751	0.00500	0.05	0	115	80 - 120				
Silver	0.04736	0.00500	0.05	0	94.7	85 - 116				

MS Sample ID: **HS20120486-08MS** Units: **mg/L** Analysis Date: **24-Dec-2020 10:59**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897743** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.103	0.00500	0.05	0.05047	105	86 - 114				
Lead	0.04857	0.00500	0.05	0.000139	96.9	88 - 115				
Selenium	0.05414	0.00500	0.05	-0.000434	109	80 - 120				
Silver	0.04515	0.00500	0.05	0.000029	90.2	85 - 116				

MSD Sample ID: **HS20120486-08MSD** Units: **mg/L** Analysis Date: **24-Dec-2020 11:15**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897749** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.1028	0.00500	0.05	0.05047	105	86 - 114	0.103	0.203	20	
Lead	0.04779	0.00500	0.05	0.000139	95.3	88 - 115	0.04857	1.63	20	
Selenium	0.0537	0.00500	0.05	-0.000434	108	80 - 120	0.05414	0.807	20	
Silver	0.04497	0.00500	0.05	0.000029	89.9	85 - 116	0.04515	0.408	20	

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20120486-08PDS** Units: **mg/L** Analysis Date: **24-Dec-2020 11:03**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897745** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.1627	0.00500	0.1	0.05047	112	80 - 120				
Lead	0.109	0.00500	0.1	0.000139	109	80 - 120				
Selenium	0.1159	0.00500	0.1	-0.000434	116	80 - 120				
Silver	0.09472	0.00500	0.1	0.000029	94.7	80 - 120				

SD Sample ID: **HS20120486-08SD** Units: **mg/L** Analysis Date: **24-Dec-2020 16:12**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5898069** PrepDate: **21-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.05135	0.0250					0.05047	1.74	10	
Lead	0.00500	0.0250					0.000139	0	10	U
Selenium	0.0125	0.0250					-0.000434	0	10	U
Silver	0.00250	0.0250					0.000029	0	10	U

The following samples were analyzed in this batch: HS20120455-01

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: 160571 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:13**
Client ID: Run ID: **SV-6_374543** SeqNo: **5884129** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.0734*	*0*	*0.08*	*0*	*91.7*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07746*	*0*	*0.08*	*0*	*96.8*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07901*	*0*	*0.08*	*0*	*98.8*	*40 - 140*				

LCS Sample ID: **LCS-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:31**
Client ID: Run ID: **SV-6_374543** SeqNo: **5902299** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.05443	0.010	0.08	0	68.0	40 - 140				
Surr: 2-Fluorobiphenyl	*0.07902*	*0*	*0.08*	*0*	*98.8*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.0831*	*0*	*0.08*	*0*	*104*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07701*	*0*	*0.08*	*0*	*96.3*	*40 - 140*				

LCSD Sample ID: **LCSD-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:49**
Client ID: Run ID: **SV-6_374543** SeqNo: **5902300** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.05387	0.010	0.08	0	67.3	40 - 140	0.05443	1.03	20	
Surr: 2-Fluorobiphenyl	*0.08157*	*0*	*0.08*	*0*	*102*	*40 - 140*	*0.07902*	*3.17*	*20*	
Surr: 4-Terphenyl-d14	*0.08221*	*0*	*0.08*	*0*	*103*	*40 - 140*	*0.0831*	*1.08*	*20*	
Surr: Nitrobenzene-d5	*0.08435*	*0*	*0.08*	*0*	*105*	*40 - 140*	*0.07701*	*9.1*	*20*	

The following samples were analyzed in this batch: HS20120455-01

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:46**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889270** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:46**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889270** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*44.65*	*1.0*	*50*	*0*	*89.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.53*	*1.0*	*50*	*0*	*93.1*	*85 - 114*				
Surr: Dibromofluoromethane	*43.66*	*1.0*	*50*	*0*	*87.3*	*80 - 119*				
Surr: Toluene-d8	*51.01*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:04**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889269** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.81	1.0	20	0	99.0	78 - 124				
1,1,1-Trichloroethane	20.86	1.0	20	0	104	74 - 131				
1,1,2,2-Tetrachloroethane	20.55	1.0	20	0	103	71 - 121				
1,1,2-Trichloroethane	20.74	1.0	20	0	104	80 - 119				
1,1-Dichloroethane	21.36	1.0	20	0	107	77 - 125				
1,1-Dichloroethene	19.61	1.0	20	0	98.1	71 - 131				
1,1-Dichloropropene	20.92	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	26.4	1.0	20	0	132	69 - 129				S
1,2,3-Trichloropropane	20.56	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	22.93	1.0	20	0	115	69 - 130				
1,2,4-Trimethylbenzene	19.93	1.0	20	0	99.6	76 - 124				
1,2-Dibromo-3-chloropropane	22.97	1.0	20	0	115	62 - 128				
1,2-Dibromoethane	21.46	1.0	20	0	107	77 - 121				
1,2-Dichlorobenzene	19.45	1.0	20	0	97.3	80 - 119				
1,2-Dichloroethane	21.92	1.0	20	0	110	73 - 128				
1,2-Dichloropropane	21.3	1.0	20	0	106	78 - 122				
1,3,5-Trimethylbenzene	18.94	1.0	20	0	94.7	75 - 124				
1,3-Dichlorobenzene	19.32	1.0	20	0	96.6	80 - 119				
1,3-Dichloropropane	21.36	1.0	20	0	107	80 - 119				
1,4-Dichlorobenzene	19.81	1.0	20	0	99.1	79 - 118				
2,2-Dichloropropane	21.66	1.0	20	0	108	60 - 139				
2-Butanone	47.29	2.0	40	0	118	56 - 143				
2-Chlorotoluene	20.21	1.0	20	0	101	79 - 122				
2-Hexanone	40.39	2.0	40	0	101	57 - 139				
4-Chlorotoluene	19.55	1.0	20	0	97.8	78 - 122				
4-Isopropyltoluene	18.73	1.0	20	0	93.7	77 - 127				
4-Methyl-2-pentanone	41.18	2.0	40	0	103	67 - 130				
Acetone	44.38	2.0	40	0	111	39 - 160				
Benzene	21	1.0	20	0	105	79 - 120				
Bromobenzene	20	1.0	20	0	100.0	80 - 120				
Bromochloromethane	20.27	1.0	20	0	101	78 - 123				
Bromodichloromethane	22.16	1.0	20	0	111	79 - 125				
Bromoform	22.03	1.0	20	0	110	66 - 130				
Bromomethane	21.82	1.0	20	0	109	53 - 141				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:04**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889269** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	46.65	2.0	40	0	117	64 - 133				
Carbon tetrachloride	21.32	1.0	20	0	107	72 - 136				
Chlorobenzene	19.89	1.0	20	0	99.5	82 - 118				
Chloroethane	21.78	1.0	20	0	109	60 - 138				
Chloroform	21.05	1.0	20	0	105	79 - 124				
Chloromethane	16.18	1.0	20	0	80.9	50 - 139				
cis-1,2-Dichloroethene	21.03	1.0	20	0	105	78 - 123				
cis-1,3-Dichloropropene	21.64	1.0	20	0	108	75 - 124				
Dibromochloromethane	20.74	1.0	20	0	104	74 - 126				
Dibromomethane	21.79	1.0	20	0	109	79 - 123				
Dichlorodifluoromethane	20.23	1.0	20	0	101	32 - 152				
Ethylbenzene	19.56	1.0	20	0	97.8	79 - 121				
Hexachlorobutadiene	23.8	1.0	20	0	119	66 - 134				
Isopropylbenzene	18.76	1.0	20	0	93.8	72 - 131				
m,p-Xylene	39.11	2.0	40	0	97.8	80 - 121				
Methylene chloride	20.85	2.0	20	0	104	74 - 124				
Naphthalene	23.83	1.0	20	0	119	61 - 128				
n-Butylbenzene	20.43	1.0	20	0	102	75 - 128				
n-Propylbenzene	19.63	1.0	20	0	98.2	76 - 126				
o-Xylene	19.15	1.0	20	0	95.7	78 - 122				
sec-Butylbenzene	18.94	1.0	20	0	94.7	77 - 126				
Styrene	20.16	1.0	20	0	101	78 - 123				
tert-Butylbenzene	18.48	1.0	20	0	92.4	78 - 124				
Tetrachloroethene	19.34	1.0	20	0	96.7	74 - 129				
Toluene	20.4	1.0	20	0	102	80 - 121				
trans-1,2-Dichloroethene	21.25	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	21.36	1.0	20	0	107	73 - 127				
Trichloroethene	20.17	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	19.51	1.0	20	0	97.6	65 - 141				
Vinyl chloride	20.21	1.0	20	0	101	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.78*	*1.0*	*50*	*0*	*104*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.21*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*50.02*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*48.63*	*1.0*	*50*	*0*	*97.3*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120486-08MS** Units: **ug/L** Analysis Date: **18-Dec-2020 16:17**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889280** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.48	1.0	20	0	97.4	78 - 124				
1,1,1-Trichloroethane	18.94	1.0	20	0	94.7	74 - 131				
1,1,2,2-Tetrachloroethane	18.78	1.0	20	0	93.9	71 - 121				
1,1,2-Trichloroethane	19.24	1.0	20	0	96.2	80 - 119				
1,1-Dichloroethane	17.21	1.0	20	0	86.1	77 - 125				
1,1-Dichloroethene	17.05	1.0	20	0	85.3	71 - 131				
1,1-Dichloropropene	19.6	1.0	20	0	98.0	78 - 125				
1,2,3-Trichlorobenzene	18.62	1.0	20	0	93.1	69 - 129				
1,2,3-Trichloropropane	18.48	1.0	20	0	92.4	73 - 122				
1,2,4-Trichlorobenzene	19.42	1.0	20	0	97.1	69 - 130				
1,2,4-Trimethylbenzene	19.94	1.0	20	0	99.7	76 - 124				
1,2-Dibromo-3-chloropropane	17.29	1.0	20	0	86.5	62 - 128				
1,2-Dibromoethane	18.71	1.0	20	0	93.5	77 - 121				
1,2-Dichlorobenzene	18.64	1.0	20	0	93.2	80 - 119				
1,2-Dichloroethane	18.85	1.0	20	0	94.2	73 - 128				
1,2-Dichloropropane	18.98	1.0	20	0	94.9	78 - 122				
1,3,5-Trimethylbenzene	19.53	1.0	20	0	97.6	75 - 124				
1,3-Dichlorobenzene	19.08	1.0	20	0	95.4	80 - 119				
1,3-Dichloropropane	19.4	1.0	20	0	97.0	80 - 119				
1,4-Dichlorobenzene	19.01	1.0	20	0	95.0	79 - 118				
2,2-Dichloropropane	18.63	1.0	20	0	93.1	60 - 139				
2-Butanone	29.98	2.0	40	0	75.0	56 - 143				
2-Chlorotoluene	20.93	1.0	20	0	105	79 - 122				
2-Hexanone	36.4	2.0	40	0	91.0	57 - 139				
4-Chlorotoluene	20.53	1.0	20	0	103	78 - 122				
4-Isopropyltoluene	19.8	1.0	20	0	99.0	77 - 127				
4-Methyl-2-pentanone	34.28	2.0	40	0	85.7	67 - 130				
Acetone	27.15	2.0	40	0	67.9	39 - 160				
Benzene	19.21	1.0	20	0	96.0	79 - 120				
Bromobenzene	19	1.0	20	0	95.0	80 - 120				
Bromochloromethane	17.93	1.0	20	0	89.7	78 - 123				
Bromodichloromethane	18.82	1.0	20	0	94.1	79 - 125				
Bromoform	18.94	1.0	20	0	94.7	66 - 130				
Bromomethane	19.97	1.0	20	0	99.9	53 - 141				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120486-08MS** Units: **ug/L** Analysis Date: **18-Dec-2020 16:17**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889280** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	36.42	2.0	40	0	91.0	64 - 133				
Carbon tetrachloride	21.49	1.0	20	0	107	72 - 136				
Chlorobenzene	19.39	1.0	20	0	97.0	82 - 118				
Chloroethane	17.78	1.0	20	0	88.9	60 - 138				
Chloroform	17.61	1.0	20	0	88.0	79 - 124				
Chloromethane	13.56	1.0	20	0	67.8	50 - 139				
cis-1,2-Dichloroethene	17.98	1.0	20	0	89.9	78 - 123				
cis-1,3-Dichloropropene	18.7	1.0	20	0	93.5	75 - 124				
Dibromochloromethane	19.09	1.0	20	0	95.4	74 - 126				
Dibromomethane	19.05	1.0	20	0	95.3	79 - 123				
Dichlorodifluoromethane	15.64	1.0	20	0	78.2	32 - 152				
Ethylbenzene	20.83	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	23.56	1.0	20	0	118	66 - 134				
Isopropylbenzene	20.69	1.0	20	0	103	72 - 131				
m,p-Xylene	41.04	2.0	40	0	103	80 - 121				
Methylene chloride	17.14	2.0	20	0	85.7	74 - 124				
Naphthalene	17.17	1.0	20	0	85.9	61 - 128				
n-Butylbenzene	20.83	1.0	20	0	104	75 - 128				
n-Propylbenzene	20.62	1.0	20	0	103	76 - 126				
o-Xylene	19.53	1.0	20	0	97.7	78 - 122				
sec-Butylbenzene	19.9	1.0	20	0	99.5	77 - 126				
Styrene	19.52	1.0	20	0	97.6	78 - 123				
tert-Butylbenzene	20.1	1.0	20	0	101	78 - 124				
Tetrachloroethene	21.83	1.0	20	0	109	74 - 129				
Toluene	20.21	1.0	20	0	101	80 - 121				
trans-1,2-Dichloroethene	18.57	1.0	20	0	92.8	75 - 124				
trans-1,3-Dichloropropene	19.74	1.0	20	0	98.7	73 - 127				
Trichloroethene	21.45	1.0	20	0	107	79 - 123				
Trichlorofluoromethane	17.38	1.0	20	0	86.9	65 - 141				
Vinyl chloride	16.83	1.0	20	0	84.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.55*	*1.0*	*50*	*0*	*91.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.25*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*44.43*	*1.0*	*50*	*0*	*88.9*	*80 - 119*				
Surr: Toluene-d8	*51.62*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120486-08MSD** Units: **ug/L** Analysis Date: **18-Dec-2020 16:38**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889281** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.72	1.0	20	0	93.6	78 - 124	19.48	3.97	20	
1,1,1-Trichloroethane	18.47	1.0	20	0	92.4	74 - 131	18.94	2.48	20	
1,1,2,2-Tetrachloroethane	19.84	1.0	20	0	99.2	71 - 121	18.78	5.5	20	
1,1,2-Trichloroethane	19.16	1.0	20	0	95.8	80 - 119	19.24	0.4	20	
1,1-Dichloroethane	16.88	1.0	20	0	84.4	77 - 125	17.21	1.97	20	
1,1-Dichloroethene	17.08	1.0	20	0	85.4	71 - 131	17.05	0.15	20	
1,1-Dichloropropene	19.57	1.0	20	0	97.9	78 - 125	19.6	0.13	20	
1,2,3-Trichlorobenzene	19.83	1.0	20	0	99.2	69 - 129	18.62	6.32	20	
1,2,3-Trichloropropane	19.16	1.0	20	0	95.8	73 - 122	18.48	3.61	20	
1,2,4-Trichlorobenzene	20.3	1.0	20	0	101	69 - 130	19.42	4.44	20	
1,2,4-Trimethylbenzene	19.84	1.0	20	0	99.2	76 - 124	19.94	0.479	20	
1,2-Dibromo-3-chloropropane	20.24	1.0	20	0	101	62 - 128	17.29	15.7	20	
1,2-Dibromoethane	19.02	1.0	20	0	95.1	77 - 121	18.71	1.69	20	
1,2-Dichlorobenzene	19.14	1.0	20	0	95.7	80 - 119	18.64	2.66	20	
1,2-Dichloroethane	18.71	1.0	20	0	93.5	73 - 128	18.85	0.74	20	
1,2-Dichloropropane	18.87	1.0	20	0	94.3	78 - 122	18.98	0.566	20	
1,3,5-Trimethylbenzene	19.2	1.0	20	0	96.0	75 - 124	19.53	1.7	20	
1,3-Dichlorobenzene	18.98	1.0	20	0	94.9	80 - 119	19.08	0.502	20	
1,3-Dichloropropane	19.29	1.0	20	0	96.4	80 - 119	19.4	0.603	20	
1,4-Dichlorobenzene	19.05	1.0	20	0	95.2	79 - 118	19.01	0.23	20	
2,2-Dichloropropane	18.58	1.0	20	0	92.9	60 - 139	18.63	0.263	20	
2-Butanone	34.24	2.0	40	0	85.6	56 - 143	29.98	13.3	20	
2-Chlorotoluene	20.46	1.0	20	0	102	79 - 122	20.93	2.28	20	
2-Hexanone	35.02	2.0	40	0	87.6	57 - 139	36.4	3.84	20	
4-Chlorotoluene	20.2	1.0	20	0	101	78 - 122	20.53	1.63	20	
4-Isopropyltoluene	18.35	1.0	20	0	91.7	77 - 127	19.8	7.59	20	
4-Methyl-2-pentanone	34.66	2.0	40	0	86.7	67 - 130	34.28	1.12	20	
Acetone	28.74	2.0	40	0	71.8	39 - 160	27.15	5.68	20	
Benzene	18.85	1.0	20	0	94.2	79 - 120	19.21	1.9	20	
Bromobenzene	19.33	1.0	20	0	96.7	80 - 120	19	1.73	20	
Bromochloromethane	17.48	1.0	20	0	87.4	78 - 123	17.93	2.55	20	
Bromodichloromethane	19.78	1.0	20	0	98.9	79 - 125	18.82	5	20	
Bromoform	18.76	1.0	20	0	93.8	66 - 130	18.94	0.975	20	
Bromomethane	19.22	1.0	20	0	96.1	53 - 141	19.97	3.85	20	

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120486-08MSD** Units: **ug/L** Analysis Date: **18-Dec-2020 16:38**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889281** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	35.75	2.0	40	0	89.4	64 - 133	36.42	1.85	20	
Carbon tetrachloride	21.23	1.0	20	0	106	72 - 136	21.49	1.2	20	
Chlorobenzene	18.38	1.0	20	0	91.9	82 - 118	19.39	5.39	20	
Chloroethane	17.92	1.0	20	0	89.6	60 - 138	17.78	0.797	20	
Chloroform	17.45	1.0	20	0	87.2	79 - 124	17.61	0.907	20	
Chloromethane	13.21	1.0	20	0	66.1	50 - 139	13.56	2.58	20	
cis-1,2-Dichloroethene	17.85	1.0	20	0	89.3	78 - 123	17.98	0.736	20	
cis-1,3-Dichloropropene	18.68	1.0	20	0	93.4	75 - 124	18.7	0.104	20	
Dibromochloromethane	18.34	1.0	20	0	91.7	74 - 126	19.09	4.03	20	
Dibromomethane	19.94	1.0	20	0	99.7	79 - 123	19.05	4.55	20	
Dichlorodifluoromethane	15.93	1.0	20	0	79.7	32 - 152	15.64	1.82	20	
Ethylbenzene	19.75	1.0	20	0	98.7	79 - 121	20.83	5.35	20	
Hexachlorobutadiene	20.2	1.0	20	0	101	66 - 134	23.56	15.4	20	
Isopropylbenzene	19.26	1.0	20	0	96.3	72 - 131	20.69	7.15	20	
m,p-Xylene	38.55	2.0	40	0	96.4	80 - 121	41.04	6.26	20	
Methylene chloride	17.13	2.0	20	0	85.6	74 - 124	17.14	0.0602	20	
Naphthalene	20.84	1.0	20	0	104	61 - 128	17.17	19.3	20	
n-Butylbenzene	19.66	1.0	20	0	98.3	75 - 128	20.83	5.77	20	
n-Propylbenzene	19.99	1.0	20	0	100.0	76 - 126	20.62	3.1	20	
o-Xylene	18.55	1.0	20	0	92.8	78 - 122	19.53	5.17	20	
sec-Butylbenzene	18.88	1.0	20	0	94.4	77 - 126	19.9	5.26	20	
Styrene	18.88	1.0	20	0	94.4	78 - 123	19.52	3.35	20	
tert-Butylbenzene	19.37	1.0	20	0	96.8	78 - 124	20.1	3.72	20	
Tetrachloroethene	20.02	1.0	20	0	100	74 - 129	21.83	8.68	20	
Toluene	19.29	1.0	20	0	96.5	80 - 121	20.21	4.63	20	
trans-1,2-Dichloroethene	17.8	1.0	20	0	89.0	75 - 124	18.57	4.2	20	
trans-1,3-Dichloropropene	18.73	1.0	20	0	93.7	73 - 127	19.74	5.26	20	
Trichloroethene	20.05	1.0	20	0	100	79 - 123	21.45	6.72	20	
Trichlorofluoromethane	17.52	1.0	20	0	87.6	65 - 141	17.38	0.807	20	
Vinyl chloride	17.17	1.0	20	0	85.8	58 - 137	16.83	1.97	20	
Surr: 1,2-Dichloroethane-d4	*44.36*	*1.0*	*50*	*0*	*88.7*	*81 - 118*	*45.55*	*2.64*	*20*	
Surr: 4-Bromofluorobenzene	*50.22*	*1.0*	*50*	*0*	*100*	*85 - 114*	*51.25*	*2.03*	*20*	
Surr: Dibromofluoromethane	*45.19*	*1.0*	*50*	*0*	*90.4*	*80 - 119*	*44.43*	*1.7*	*20*	
Surr: Toluene-d8	*50.42*	*1.0*	*50*	*0*	*101*	*89 - 112*	*51.62*	*2.35*	*20*	

ALS Houston, US Date: 29-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:	HS20120455

QC BATCH REPORT

Batch ID:	**R375002 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20120455-01 HS20120455-03

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20120455

QC BATCH REPORT

Batch ID: R374281 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R374281** Units: **mg/L** Analysis Date: **09-Dec-2020 12:40**
Client ID: Run ID: **UV-2450_374281** SeqNo: **5871129** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R374281** Units: **mg/L** Analysis Date: **09-Dec-2020 12:40**
Client ID: Run ID: **UV-2450_374281** SeqNo: **5871128** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.245	0.0100	0.25	0	98.0	90 - 111				

MS Sample ID: **HS20120449-01MS** Units: **mg/L** Analysis Date: **09-Dec-2020 12:40**
Client ID: Run ID: **UV-2450_374281** SeqNo: **5871131** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.226	0.0100	0.25	0.001	90.0	90 - 111				S

MSD Sample ID: **HS20120449-01MSD** Units: **mg/L** Analysis Date: **09-Dec-2020 12:40**
Client ID: Run ID: **UV-2450_374281** SeqNo: **5871130** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.24	0.0100	0.25	0.001	95.6	90 - 111	0.226	6.01	20	

The following samples were analyzed in this batch: HS20120455-01

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: **HS20120455**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20120455

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120455-01	LH18/24-SP650_120820	Login	12/9/2020 12:33:31 PM	PMG	MET100
HS20120455-01	LH18/24-SP650_120820	Login	12/9/2020 12:33:31 PM	PMG	EXT039
HS20120455-01	LH18/24-SP650_120820	Login	12/9/2020 12:33:31 PM	PMG	WET271
HS20120455-01	LH18/24-SP650_120820	Login	12/9/2020 12:33:31 PM	PMG	VOA207
HS20120455-02	LH18/24-SP650_120820_BIX	Login	12/9/2020 12:33:31 PM	PMG	Sub
HS20120455-03	Trip Blank	Login	12/9/2020 12:33:31 PM	PMG	VOA207

ALS Houston, US Date: 29-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120455 **Date/Time Received:** **09-Dec-2020 10:50**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Paresh M. Giga* 09-Dec-2020 12:36 **Reviewed by:** */S/ RJ Modashia* 09-Dec-2020 14:57

eSignature Date/Time eSignature Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	3.6C U/c	IR25
Cooler(s)/Kit(s):	46339	
Date/Time sample(s) sent to storage:	12/9/2020 12:45	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX 77099 (281) 530 – 5656 ATTN: RJ Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job:
GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20120455
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Effluent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOLATILES	SILVER, SELENIUM, LEAD, BARIUM	HEXAVALENT CHROMIUM	1, 4 - DIOXANE	PERCHLORATE					Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_120820	Water	12/08/20 / 14:00		3	X									HCL	
LH18/24-SP650_120820	Water	12/08/20 / 14:00		2			X	X						NONE	
LH18/24-SP650_120820_BIX	Water	12/08/20 / 14:00		1					X					NONE	
LH18/24-SP650_120820	Water	12/08/20 / 14:00		1		X								HNO3	
Trip Blank	Water	12/08/20		2	X									HCL	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	12/08/20	14:30	JM PM	12-9-20	10:50						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

46339 3.6C IR25 CFo

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46339

CUSTODY SEAL

Date: 12/8/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 12109120

46339 DEC 0 9 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46339

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PHB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09SEP20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656

RT **917** 1
10:30
B2 **B03**

REF: ADDITIONAL BOTTLES - BO 73689 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1544

WED - 09 DEC AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FID: 152705 08Dec2020 GGGA 56062/9196/05A2

December 23, 2020 Service Request No:E2001208

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120455

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 09, 2020
For your reference, these analyses have been assigned our service request number **E2001208.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001208
Project:	HS20120455	**Date Received:**	12/09/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 12/09/20. The sample was received in good condition and is consistent with the accompanying chain of custody form.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000667: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS/DLCS RPD exceeded QC limits; the individual recoveries met acceptance criteria.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001208
Project: HS20120455

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001208-001	LH18/24-SP650_120820_BIX	12/8/2020	1400

Service Request Summary

Folder #: **E2001208**
Client Name: ALS Environmental - US
Project Name: HS20120455
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/09/20
Internal Due Date: 12/23/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120455
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 2B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001208-001	LH18/24-SP650_120820_BIX	Water	12/08/20 1400	**IV**

Service Request Summary

Folder #:	**E2001208**
Client Name:	ALS Environmental - US
Project Name:	HS20120455
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	12/09/20
Internal Due Date:	12/23/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20120455
EDD:	No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved

Location: EHRMS-WIC 2B

Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15301**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120455
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120455-02**	**LH18/24-SP650_120820_BIX**	**Water**	**08 Dec 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			23 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 12/9/2020

Received By: _____ Date/Time: 12/9/2020 1801

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist: CH

Client/Project: ALS - H

Thermometer ID: 1231

Date/Time Received: 12/9/20 Initials: CH Date/Time Logged in: 12/10/20 Initials: CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ✓ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/9/20	1000	CH	1.4	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

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Houston, TX 77099
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F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001208-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001209-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001210-001	LH18/24-SP140_120820	.01	6850/ClO4 DOD			Water	10mL	
4	E2001211-001	MW5_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001211-002	18CPTMW08DW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001211-003	18CPTMW08SW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001211-004	18CPTMW08SW_120820_a	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001211-005	MW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001211-006	MW16_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001211-007	18CPTMW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001211-008	18WW24_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001211-009	18CTPMW15_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001217-001	18CPTMW04_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001217-002	18CPTMW04SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001217-003	AWD3_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001217-004	AWD3_120920_a	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001217-005	MW10_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001217-006	18CPTMW12SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2001217-007	18CPTMW12DW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2001217-008	MW7_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2000677-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000677-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2000677-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000677-02 1.00µL EQ2000677-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001208-001	100.00µL	E2001209-001	100.00µL	E2001210-001	100.00µL	E2001211-001	100.00µL	E2001211-002	100.00µL	E2001211-003	100.00µL
E2001211-004	100.00µL	E2001211-005	100.00µL	E2001211-006	100.00µL	E2001211-007	100.00µL	E2001211-008	100.00µL	E2001211-009	100.00µL
E2001217-001	100.00µL	E2001217-002	100.00µL	E2001217-003	100.00µL	E2001217-004	100.00µL	E2001217-005	100.00µL	E2001217-006	100.00µL
E2001217-007	100.00µL	E2001217-008	100.00µL	EQ2000677-01	100.00µL	EQ2000677-02	100.00µL	EQ2000677-03	100.00µL		

Preparation Information Benchsheet

Prep Run#: 371505
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 12/15/20 08:58

Preparation Steps

Step: Preparation
Started: 12/15/20 08:58
Finished: 12/15/20 11:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/15/2020

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001208
Project:	HS20120455	**Date Collected:**	12/ 8/20 1400
Sample Matrix:	Water	**Date Received:**	12/ 9/20
Sample Name:	LH18/24-SP650_120820_BIX	**Units:**	µg/L
Lab Code:	E2001208-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	12/15/20	12/22/20 15:23	371505	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001208
Project:	HS20120455	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000677-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/15/20	12/22/20 17:46	371505	708075	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20120455
Sample Matrix: Water

Service Request: E2001208
Date Analyzed: 12/22/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371505

	Lab Control Sample EQ2000677-02			Duplicate Lab Control Sample EQ2000677-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.104	0.100	104	0.0873	0.100	87	84 - 119	17 *	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001208
Project:	HS20120455	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.104**		0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:07	371505	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001208
Project:	HS20120455	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0873**	J	0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:15	371505	708075	

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January 04, 2021

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120802**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Dec 16, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120802

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120802-01	LH18/24-SP650_121520	Water		15-Dec-2020 14:00	16-Dec-2020 10:40	☐
HS20120802-02	LH18/24-SP650_121520-BIX	Water		15-Dec-2020 14:00	16-Dec-2020 10:40	☐

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120802

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

WetChemistry by Method E350.3

Batch ID: R375627

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R375274

Sample ID: LH18/24-SP650_121520 (HS20120802-01MS)

• The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: LH18/24-SP650_121520 (HS20120802-01MSD)

• The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20120802

Sample ID: LH18/24-SP650_121520 Lab ID:HS20120802-01

Collection Date: 15-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: KVL
Nitrogen, Ammonia (As N)	**3.3**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	30-Dec-2020 12:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**0.880**	a	**0.0500**	**0.125**	**0.125**	**mg/L**	5	17-Dec-2020 12:49
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	04-Jan-2021 13:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20120802
Sample ID: LH18/24-SP650_121520-BIX
Lab ID:HS20120802-02
Collection Date: 15-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120802

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375274 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20120802-01	LH18/24-SP650_121520	15 Dec 2020 14:00			17 Dec 2020 12:49	5
Batch ID: R375627 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20120802-01	LH18/24-SP650_121520	15 Dec 2020 14:00			30 Dec 2020 12:00	1
Batch ID: R375718 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20120802-02	LH18/24-SP650_121520-BIX	15 Dec 2020 14:00			31 Dec 2020 12:46	1
Batch ID: R375802 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20120802-01	LH18/24-SP650_121520	15 Dec 2020 14:00			04 Jan 2021 13:14	1

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120802

QC BATCH REPORT

Batch ID: R375274 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-375274** Units: **mg/L** Analysis Date: **17-Dec-2020 12:49**
Client ID: Run ID: **UV-2450_375274** SeqNo: **5895900** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-375274** Units: **mg/L** Analysis Date: **17-Dec-2020 12:49**
Client ID: Run ID: **UV-2450_375274** SeqNo: **5895901** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.238	0.0250	0.25	0	95.2	85 - 115				

LCSD Sample ID: **LCSD-375274** Units: **mg/L** Analysis Date: **17-Dec-2020 12:49**
Client ID: Run ID: **UV-2450_375274** SeqNo: **5903606** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.246	0.0250	0.25	0	98.4	85 - 115	0.238	3.31	20	

MS Sample ID: **HS20120802-01MS** Units: **mg/L** Analysis Date: **17-Dec-2020 12:49**
Client ID: **LH18/24-SP650_121520** Run ID: **UV-2450_375274** SeqNo: **5898846** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	1.115	0.125	1.25	0.88	18.8	80 - 120				S

MSD Sample ID: **HS20120802-01MSD** Units: **mg/L** Analysis Date: **17-Dec-2020 12:49**
Client ID: **LH18/24-SP650_121520** Run ID: **UV-2450_375274** SeqNo: **5898845** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	1.125	0.125	1.25	0.88	19.6	80 - 120	1.115	0.893	20	S

The following samples were analyzed in this batch: HS20120802-01

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20120802

QC BATCH REPORT

Batch ID: R375627 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R375627** Units: **mg/L** Analysis Date: **30-Dec-2020 12:00**
Client ID: Run ID: **WetChem_HS_375627** SeqNo: **5904254** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-R375627** Units: **mg/L** Analysis Date: **30-Dec-2020 12:00**
Client ID: Run ID: **WetChem_HS_375627** SeqNo: **5904253** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.01	0.20	10	0	100	80 - 120				

MS Sample ID: **HS20120802-01MS** Units: **mg/L** Analysis Date: **30-Dec-2020 12:00**
Client ID: **LH18/24-SP650_121520** Run ID: **WetChem_HS_375627** SeqNo: **5904256** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	13.6	0.20	10	3.347	103	80 - 120				

MSD Sample ID: **HS20120802-01MSD** Units: **mg/L** Analysis Date: **30-Dec-2020 12:00**
Client ID: **LH18/24-SP650_121520** Run ID: **WetChem_HS_375627** SeqNo: **5904255** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	12.87	0.20	10	3.347	95.2	80 - 120	13.6	5.52	20	

The following samples were analyzed in this batch: HS20120802-01

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20120802**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 04-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20120802

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120802-01	LH18/24-SP650_121520	Login	12/16/2020 9:39:41 AM	NDR	WET258
HS20120802-01	LH18/24-SP650_121520	Login	12/16/2020 9:39:41 AM	NDR	WET258
HS20120802-01	LH18/24-SP650_121520	Login	12/16/2020 9:39:41 AM	NDR	Sub
HS20120802-02	LH18/24-SP650_121520-BIX	Login	12/16/2020 9:39:41 AM	NDR	Sub

ALS Houston, US Date: 04-Jan-21

Sample Receipt Checklist

Work Order ID: HS20120802 **Date/Time Received:** **16-Dec-2020 10:40**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Nilesh D. Ranchod* (eSignature) 16-Dec-2020 11:41 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 16-Dec-2020 12:17 (Date/Time)

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.4C U/c	IR31
Cooler(s)/Kit(s):	46390	
Date/Time sample(s) sent to storage:	12/16/2020 12:15	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_121520	Water	12/15/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_121520	Water	12/15/20 / 14:00		1			X		NONE	
LH18/24–SP650_121520_BIX	Water	12/15/20 / 14:00		1				X	NONE	

HS20120802
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Additional Remarks: Standard TAT on all parameters

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	12/15/20	14:30							JM	12/16/20	10:40

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

Cooler # 46390 Temp 4°C ERM 31 0.4 CIFO-J

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46390

CUSTODY SEAL

Date: 12/15/20 Time: 1430
Name: Scott Beesinger
Company: BHPTe

Seal Broken By: SM
Date: 12/16/20

46390

DEC 16 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46390

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINGER
APTIM
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 23OCT20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-67-BO 74611-RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8881 9590

WED - 16 DEC 10:30
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

#476872 12/15 5EBJ2/9196/B766

December 30, 2020 Service Request No:E2001236

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120802

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 16, 2020
For your reference, these analyses have been assigned our service request number **E2001236.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001236
Project:	HS20120802	**Date Received:**	12/16/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 12/16/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000703: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits

Sample E2001236-001 wase analyzed at a dilution (10x) due to matrix interference with the Internal Standard at a 1x DF.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001236
Project: HS20120802

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001236-001	LH18/24-SP650_121520-BIX	12/15/2020	1400

Service Request Summary

Folder #: **E2001236**
Client Name: ALS Environmental - US
Project Name: HS20120802
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/16/20
Internal Due Date: 12/31/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120802
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001236-001	LH18/24-SP650_121520-BIX	Water	12/15/20 1400	**IV**

Service Request Summary

Folder #: **E2001236**
Client Name: ALS Environmental - US
Project Name: HS20120802
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/16/20
Internal Due Date: 12/31/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120802
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 12/31,level IV due 1/8

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15350**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120802
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120802-02**	**LH18/24-SP650_120220-BIX**	**Water**	**15 Dec 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: Courier _____ Date/Time: 12/16/20 1155

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist: CG

Client/Project: ALS-H

Thermometer ID: IR35

Date/Time Received: 12/18/20 Initials: CG

Date/Time Logged in: 12/18/20 Initials: CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ Courier (ALS) ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/18/20	1155	CG	4.1	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371928 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/22/20 09:08

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001235-001	AWD1_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2001235-002	120_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2001235-003	MW14_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2001235-004	MW3_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001235-005	MW3_121520_a	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001235-006	18CPTMW14_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001235-007	18WW22_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001235-008	18CPTMW18_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001235-009	C03_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001236-001	LH18/24-SP650_121520-BIX	.01	6850/ClO4 DOD			Water	10mL	
11	E2001237-001	MW22_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001237-002	18CPTMW06_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001237-003	18CPTMW06_121420_a	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001237-004	109_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001237-005	MW21_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001237-006	18CPTMW07_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001237-007	18CPTMW24_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001237-008	18WW08_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2001237-009	AWD4_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
20	EQ2000703-01	MB		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000703-02	LCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000703-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000703-02 1.00µL EQ2000703-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001235-001	100.00µL	E2001235-002	100.00µL	E2001235-003	100.00µL	E2001235-004	100.00µL	E2001235-005	100.00µL	E2001235-006	100.00µL
E2001235-007	100.00µL	E2001235-008	100.00µL	E2001235-009	100.00µL	E2001236-001	100.00µL	E2001237-001	100.00µL	E2001237-002	100.00µL
E2001237-003	100.00µL	E2001237-004	100.00µL	E2001237-005	100.00µL	E2001237-006	100.00µL	E2001237-007	100.00µL	E2001237-008	100.00µL
E2001237-009	100.00µL	EQ2000703-01	100.00µL	EQ2000703-02	100.00µL	EQ2000703-03	100.00µL				

Preparation Information Benchsheet

Prep Run#: 371928
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 12/22/20 09:08

Preparation Steps

Step: Preparation
Started: 12/22/20 09:08
Finished: 12/22/20 14:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/22/2020

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001236
Project:	HS20120802	**Date Collected:**	12/15/20 1400
Sample Matrix:	Water	**Date Received:**	12/16/20
Sample Name:	LH18/24-SP650_121520-BIX	**Units:**	µg/L
Lab Code:	E2001236-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/22/20	12/29/20 16:06	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001236
Project:	HS20120802	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000703-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/22/20	12/29/20 13:59	371928	708661	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20120802
Sample Matrix: Water

Service Request: E2001236
Date Analyzed: 12/29/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371928

	Lab Control Sample EQ2000703-02			Duplicate Lab Control Sample EQ2000703-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0919	0.100	92	0.0968	0.100	97	84 - 119	5	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001236
Project:	HS20120802	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000703-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0919**	J	0.100	0.0500	0.0250	1	12/22/20	12/29/20 14:07	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001236
Project:	HS20120802	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000703-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0968**	J	0.100	0.0500	0.0250	1	12/22/20	12/29/20 14:15	371928	708661	

ALS Environmental
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December 31, 2020

Analytical Report for Service Request No: K2011949

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20120802

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 18, 2020
For your reference, these analyses have been assigned our service request number **K2011949.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20120802
Sample Matrix: Water

Service Request: K2011949
Date Received: 12/18/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 12/18/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 12/31/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
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F: +1 281 530 5887
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Subcontract Chain of Custody

ICJO 11949

SAMPLING STATE: **Dept of Defense** **COC ID:** **15349**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120802
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120802-01**	**LH18/24-SP650_121520**	**Water**	**15 Dec 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			31 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 12/17/2020 1800

Received By: _____ Date/Time: 12/18/20 0950

Cooler ID(s): _____ Temperature(s): _____

PM Kelly

Cooler Receipt and Preservation Form

Client A18-Houston Service Request K20 11949

Received: 12/18/20 Opened: 12/18/20 By: JBR Unloaded: 12/18/20 By: JBR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* Hunt *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
D.B	—	IR07		—		9470308380131	

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2011949
Project:	HS20120802	**Date Collected:**	12/15/20
Sample Matrix:	Water	**Date Received:**	12/18/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_121520	K2011949-001	**0.89**	0.50	0.20	0.07	1	12/29/20 12:29	
Method Blank	K2011949-MB	ND U	0.50	0.20	0.07	1	12/29/20 12:29	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2011949
Project:	HS20120802	**Date Analyzed:**	12/29/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	708571

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2011949-LCS	23.7	25.0	95	83-117

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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December 23, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120803**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Dec 16, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20120803

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120803-01	LH18/24-SP650_121520	Water		15-Dec-2020 14:00	16-Dec-2020 10:40	☐
HS20120803-02	Trip Blank	Water		15-Dec-2020 00:00	16-Dec-2020 10:40	☐

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20120803

GCMS Volatiles by Method SW8260

Batch ID: R375144

Sample ID: CCV

- Acetone, 2-Butanone, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene exceeded %D limits for CCV. Samples are ND for these compounds.

WetChemistry by Method SW9056

Batch ID: R375249

Sample ID: LH18/24-SP650_121520 (HS20120803-01MS)

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Chloride)

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20120803
Sample ID: LH18/24-SP650_121520 Lab ID:HS20120803-01
Collection Date: 15-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:58
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:58
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:58
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:58
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:58
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:58
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 13:58
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 13:58
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:58
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 13:58
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 13:58
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:58
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 13:58
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20120803
Sample ID: LH18/24-SP650_121520 Lab ID:HS20120803-01
Collection Date: 15-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
cis-1,2-Dichloroethene	**7.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 13:58
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 13:58
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 13:58
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 13:58
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:58
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Trichloroethene	**2.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 13:58
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:58
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:58
Surr: 1,2-Dichloroethane-d4	*92.3*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 13:58*
Surr: 4-Bromofluorobenzene	*94.7*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 13:58*
Surr: Dibromofluoromethane	*91.0*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 13:58*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 13:58*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**740**		**4.00**	**10.0**	**10.0**	**mg/L**	20	23-Dec-2020 04:02
Sulfate	**23.6**		**0.200**	**0.500**	**0.500**	**mg/L**	1	23-Dec-2020 03:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20120803
Sample ID: Trip Blank Lab ID:HS20120803-02
Collection Date: 15-Dec-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:16
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:16
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:16
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:16
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:16
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:16
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:16
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:16
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:16
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 13:16
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:16
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 13:16
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:16
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:16
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 13:16
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 13:16
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:16
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 13:16
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20120803

Sample ID: Trip Blank Lab ID:HS20120803-02

Collection Date: 15-Dec-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:16
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 13:16
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 13:16
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 13:16
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:16
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:16
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:16
Surr: 1,2-Dichloroethane-d4	*92.0*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 13:16*
Surr: 4-Bromofluorobenzene	*96.5*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 13:16*
Surr: Dibromofluoromethane	*90.3*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 13:16*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 13:16*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375144 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120803-01	LH18/24-SP650_121520	15 Dec 2020 14:00			21 Dec 2020 13:58	1
HS20120803-02	Trip Blank	15 Dec 2020 00:00			21 Dec 2020 13:16	1
Batch ID: R375249 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20120803-01	LH18/24-SP650_121520	15 Dec 2020 14:00			23 Dec 2020 04:02	20
HS20120803-01	LH18/24-SP650_121520	15 Dec 2020 14:00			23 Dec 2020 03:07	1

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:55**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892736** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:55**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892736** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.69*	*1.0*	*50*	*0*	*91.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.14*	*1.0*	*50*	*0*	*94.3*	*85 - 114*				
Surr: Dibromofluoromethane	*44.65*	*1.0*	*50*	*0*	*89.3*	*80 - 119*				
Surr: Toluene-d8	*52.13*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:13**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.87	1.0	20	0	109	78 - 124				
1,1,1-Trichloroethane	22.16	1.0	20	0	111	74 - 131				
1,1,2,2-Tetrachloroethane	22.89	1.0	20	0	114	71 - 121				
1,1,2-Trichloroethane	22.28	1.0	20	0	111	80 - 119				
1,1-Dichloroethane	21.16	1.0	20	0	106	77 - 125				
1,1-Dichloroethene	19.04	1.0	20	0	95.2	71 - 131				
1,1-Dichloropropene	21.7	1.0	20	0	109	78 - 125				
1,2,3-Trichlorobenzene	24.69	1.0	20	0	123	69 - 129				
1,2,3-Trichloropropane	22.76	1.0	20	0	114	73 - 122				
1,2,4-Trichlorobenzene	25.56	1.0	20	0	128	69 - 130				
1,2,4-Trimethylbenzene	20.94	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	22.21	1.0	20	0	111	62 - 128				
1,2-Dibromoethane	22.19	1.0	20	0	111	77 - 121				
1,2-Dichlorobenzene	20.53	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	22.9	1.0	20	0	114	73 - 128				
1,2-Dichloropropane	23.03	1.0	20	0	115	78 - 122				
1,3,5-Trimethylbenzene	20.13	1.0	20	0	101	75 - 124				
1,3-Dichlorobenzene	21.13	1.0	20	0	106	80 - 119				
1,3-Dichloropropane	23.27	1.0	20	0	116	80 - 119				
1,4-Dichlorobenzene	21.04	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	21.81	1.0	20	0	109	60 - 139				
2-Butanone	50.69	2.0	40	0	127	56 - 143				
2-Chlorotoluene	22	1.0	20	0	110	79 - 122				
2-Hexanone	45.96	2.0	40	0	115	57 - 139				
4-Chlorotoluene	21.06	1.0	20	0	105	78 - 122				
4-Isopropyltoluene	19.44	1.0	20	0	97.2	77 - 127				
4-Methyl-2-pentanone	44.58	2.0	40	0	111	67 - 130				
Acetone	52.59	2.0	40	0	131	39 - 160				
Benzene	22.24	1.0	20	0	111	79 - 120				
Bromobenzene	22.03	1.0	20	0	110	80 - 120				
Bromochloromethane	21.68	1.0	20	0	108	78 - 123				
Bromodichloromethane	23.16	1.0	20	0	116	79 - 125				
Bromoform	22.03	1.0	20	0	110	66 - 130				
Bromomethane	23.34	1.0	20	0	117	53 - 141				

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:13**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	47.57	2.0	40	0	119	64 - 133				
Carbon tetrachloride	22.16	1.0	20	0	111	72 - 136				
Chlorobenzene	20.91	1.0	20	0	105	82 - 118				
Chloroethane	19.19	1.0	20	0	96.0	60 - 138				
Chloroform	22.29	1.0	20	0	111	79 - 124				
Chloromethane	16.01	1.0	20	0	80.0	50 - 139				
cis-1,2-Dichloroethene	21.68	1.0	20	0	108	78 - 123				
cis-1,3-Dichloropropene	22.96	1.0	20	0	115	75 - 124				
Dibromochloromethane	22.05	1.0	20	0	110	74 - 126				
Dibromomethane	23.4	1.0	20	0	117	79 - 123				
Dichlorodifluoromethane	19.22	1.0	20	0	96.1	32 - 152				
Ethylbenzene	21.69	1.0	20	0	108	79 - 121				
Hexachlorobutadiene	22.96	1.0	20	0	115	66 - 134				
Isopropylbenzene	19.91	1.0	20	0	99.5	72 - 131				
m,p-Xylene	41.68	2.0	40	0	104	80 - 121				
Methylene chloride	22.47	2.0	20	0	112	74 - 124				
Naphthalene	23.83	1.0	20	0	119	61 - 128				
n-Butylbenzene	20.47	1.0	20	0	102	75 - 128				
n-Propylbenzene	21.46	1.0	20	0	107	76 - 126				
o-Xylene	21.34	1.0	20	0	107	78 - 122				
sec-Butylbenzene	19.78	1.0	20	0	98.9	77 - 126				
Styrene	20.68	1.0	20	0	103	78 - 123				
tert-Butylbenzene	19.4	1.0	20	0	97.0	78 - 124				
Tetrachloroethene	21.04	1.0	20	0	105	74 - 129				
Toluene	21.98	1.0	20	0	110	80 - 121				
trans-1,2-Dichloroethene	22.98	1.0	20	0	115	75 - 124				
trans-1,3-Dichloropropene	23.18	1.0	20	0	116	73 - 127				
Trichloroethene	20.96	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	19.14	1.0	20	0	95.7	65 - 141				
Vinyl chloride	19.74	1.0	20	0	98.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.83*	*1.0*	*50*	*0*	*104*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.21*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*50.01*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*51.14*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20120803-01MS** Units: **ug/L** Analysis Date: **21-Dec-2020 15:43**
Client ID: **LH18/24-SP650_121520** Run ID: **VOA6_375144** SeqNo: **5892744** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.14	1.0	20	0	95.7	78 - 124				
1,1,1-Trichloroethane	19.42	1.0	20	0	97.1	74 - 131				
1,1,2,2-Tetrachloroethane	19.69	1.0	20	0	98.5	71 - 121				
1,1,2-Trichloroethane	18.91	1.0	20	0	94.6	80 - 119				
1,1-Dichloroethane	18.49	1.0	20	0	92.4	77 - 125				
1,1-Dichloroethene	17.01	1.0	20	0	85.1	71 - 131				
1,1-Dichloropropene	20.64	1.0	20	0	103	78 - 125				
1,2,3-Trichlorobenzene	18.82	1.0	20	0	94.1	69 - 129				
1,2,3-Trichloropropane	19.42	1.0	20	0	97.1	73 - 122				
1,2,4-Trichlorobenzene	19.36	1.0	20	0	96.8	69 - 130				
1,2,4-Trimethylbenzene	21.1	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	19.11	1.0	20	0	95.5	62 - 128				
1,2-Dibromoethane	18.91	1.0	20	0	94.5	77 - 121				
1,2-Dichlorobenzene	19.22	1.0	20	0	96.1	80 - 119				
1,2-Dichloroethane	18.83	1.0	20	0	94.1	73 - 128				
1,2-Dichloropropane	19.38	1.0	20	0	96.9	78 - 122				
1,3,5-Trimethylbenzene	21.14	1.0	20	0	106	75 - 124				
1,3-Dichlorobenzene	19.66	1.0	20	0	98.3	80 - 119				
1,3-Dichloropropane	19.57	1.0	20	0	97.8	80 - 119				
1,4-Dichlorobenzene	20.16	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	19.05	1.0	20	0	95.3	60 - 139				
2-Butanone	36.8	2.0	40	0	92.0	56 - 143				
2-Chlorotoluene	20.92	1.0	20	0	105	79 - 122				
2-Hexanone	35.79	2.0	40	0	89.5	57 - 139				
4-Chlorotoluene	20.79	1.0	20	0	104	78 - 122				
4-Isopropyltoluene	21.93	1.0	20	0	110	77 - 127				
4-Methyl-2-pentanone	36.35	2.0	40	0	90.9	67 - 130				
Acetone	27.59	2.0	40	0	69.0	39 - 160				
Benzene	19.54	1.0	20	0	97.7	79 - 120				
Bromobenzene	20.07	1.0	20	0	100	80 - 120				
Bromochloromethane	16.96	1.0	20	0	84.8	78 - 123				
Bromodichloromethane	19.37	1.0	20	0	96.9	79 - 125				
Bromoform	19.5	1.0	20	0	97.5	66 - 130				
Bromomethane	19.78	1.0	20	0	98.9	53 - 141				

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120803-01MS** Units: **ug/L** Analysis Date: **21-Dec-2020 15:43**
Client ID: **LH18/24-SP650_121520** Run ID: **VOA6_375144** SeqNo: **5892744** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.51	2.0	40	0	93.8	64 - 133				
Carbon tetrachloride	21.84	1.0	20	0	109	72 - 136				
Chlorobenzene	19.35	1.0	20	0	96.7	82 - 118				
Chloroethane	16.83	1.0	20	0	84.2	60 - 138				
Chloroform	18.32	1.0	20	0	91.6	79 - 124				
Chloromethane	14.13	1.0	20	0	70.6	50 - 139				
cis-1,2-Dichloroethene	25.42	1.0	20	7.166	91.3	78 - 123				
cis-1,3-Dichloropropene	18.89	1.0	20	0	94.5	75 - 124				
Dibromochloromethane	18.71	1.0	20	0	93.6	74 - 126				
Dibromomethane	19.52	1.0	20	0	97.6	79 - 123				
Dichlorodifluoromethane	16.4	1.0	20	0	82.0	32 - 152				
Ethylbenzene	20.25	1.0	20	0	101	79 - 121				
Hexachlorobutadiene	23.81	1.0	20	0	119	66 - 134				
Isopropylbenzene	20.28	1.0	20	0	101	72 - 131				
m,p-Xylene	39.38	2.0	40	0	98.5	80 - 121				
Methylene chloride	17.8	2.0	20	0	89.0	74 - 124				
Naphthalene	16.71	1.0	20	0	83.6	61 - 128				
n-Butylbenzene	22.8	1.0	20	0	114	75 - 128				
n-Propylbenzene	21.19	1.0	20	0	106	76 - 126				
o-Xylene	19.48	1.0	20	0	97.4	78 - 122				
sec-Butylbenzene	22.16	1.0	20	0	111	77 - 126				
Styrene	19.31	1.0	20	0	96.6	78 - 123				
tert-Butylbenzene	21.7	1.0	20	0	109	78 - 124				
Tetrachloroethene	21.02	1.0	20	0	105	74 - 129				
Toluene	19.58	1.0	20	0	97.9	80 - 121				
trans-1,2-Dichloroethene	17.96	1.0	20	0	89.8	75 - 124				
trans-1,3-Dichloropropene	18.69	1.0	20	0	93.4	73 - 127				
Trichloroethene	22.69	1.0	20	2.069	103	79 - 123				
Trichlorofluoromethane	17.63	1.0	20	0	88.2	65 - 141				
Vinyl chloride	17.84	1.0	20	0	89.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.83*	*1.0*	*50*	*0*	*89.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.81*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*44.9*	*1.0*	*50*	*0*	*89.8*	*80 - 119*				
Surr: Toluene-d8	*50.65*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120803-01MSD** Units: **ug/L** Analysis Date: **21-Dec-2020 16:04**
Client ID: **LH18/24-SP650_121520** Run ID: **VOA6_375144** SeqNo: **5892745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.2	1.0	20	0	96.0	78 - 124	19.14	0.309	20	
1,1,1-Trichloroethane	18.1	1.0	20	0	90.5	74 - 131	19.42	7.04	20	
1,1,2,2-Tetrachloroethane	18.54	1.0	20	0	92.7	71 - 121	19.69	6.06	20	
1,1,2-Trichloroethane	18.46	1.0	20	0	92.3	80 - 119	18.91	2.4	20	
1,1-Dichloroethane	18.13	1.0	20	0	90.6	77 - 125	18.49	1.97	20	
1,1-Dichloroethene	16.34	1.0	20	0	81.7	71 - 131	17.01	3.99	20	
1,1-Dichloropropene	20.18	1.0	20	0	101	78 - 125	20.64	2.26	20	
1,2,3-Trichlorobenzene	21.37	1.0	20	0	107	69 - 129	18.82	12.7	20	
1,2,3-Trichloropropane	18.68	1.0	20	0	93.4	73 - 122	19.42	3.89	20	
1,2,4-Trichlorobenzene	20.22	1.0	20	0	101	69 - 130	19.36	4.34	20	
1,2,4-Trimethylbenzene	19.72	1.0	20	0	98.6	76 - 124	21.1	6.76	20	
1,2-Dibromo-3-chloropropane	17.98	1.0	20	0	89.9	62 - 128	19.11	6.08	20	
1,2-Dibromoethane	18.49	1.0	20	0	92.5	77 - 121	18.91	2.23	20	
1,2-Dichlorobenzene	18.54	1.0	20	0	92.7	80 - 119	19.22	3.56	20	
1,2-Dichloroethane	18.7	1.0	20	0	93.5	73 - 128	18.83	0.701	20	
1,2-Dichloropropane	18.9	1.0	20	0	94.5	78 - 122	19.38	2.54	20	
1,3,5-Trimethylbenzene	19.97	1.0	20	0	99.9	75 - 124	21.14	5.67	20	
1,3-Dichlorobenzene	18.51	1.0	20	0	92.6	80 - 119	19.66	6.04	20	
1,3-Dichloropropane	19.43	1.0	20	0	97.2	80 - 119	19.57	0.706	20	
1,4-Dichlorobenzene	18.88	1.0	20	0	94.4	79 - 118	20.16	6.55	20	
2,2-Dichloropropane	18.62	1.0	20	0	93.1	60 - 139	19.05	2.29	20	
2-Butanone	34.62	2.0	40	0	86.5	56 - 143	36.8	6.11	20	
2-Chlorotoluene	19.58	1.0	20	0	97.9	79 - 122	20.92	6.62	20	
2-Hexanone	36.29	2.0	40	0	90.7	57 - 139	35.79	1.39	20	
4-Chlorotoluene	19.54	1.0	20	0	97.7	78 - 122	20.79	6.17	20	
4-Isopropyltoluene	20.52	1.0	20	0	103	77 - 127	21.93	6.6	20	
4-Methyl-2-pentanone	37.79	2.0	40	0	94.5	67 - 130	36.35	3.89	20	
Acetone	27.58	2.0	40	0	68.9	39 - 160	27.59	0.0652	20	
Benzene	18.89	1.0	20	0	94.5	79 - 120	19.54	3.37	20	
Bromobenzene	18.88	1.0	20	0	94.4	80 - 120	20.07	6.1	20	
Bromochloromethane	17.91	1.0	20	0	89.6	78 - 123	16.96	5.43	20	
Bromodichloromethane	18.97	1.0	20	0	94.9	79 - 125	19.37	2.1	20	
Bromoform	18.99	1.0	20	0	94.9	66 - 130	19.5	2.66	20	
Bromomethane	18.04	1.0	20	0	90.2	53 - 141	19.78	9.21	20	

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120803-01MSD** Units: **ug/L** Analysis Date: **21-Dec-2020 16:04**
Client ID: **LH18/24-SP650_121520** Run ID: **VOA6_375144** SeqNo: **5892745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	36.67	2.0	40	0	91.7	64 - 133	37.51	2.28	20	
Carbon tetrachloride	20.77	1.0	20	0	104	72 - 136	21.84	5.03	20	
Chlorobenzene	18.52	1.0	20	0	92.6	82 - 118	19.35	4.34	20	
Chloroethane	16.26	1.0	20	0	81.3	60 - 138	16.83	3.47	20	
Chloroform	17.76	1.0	20	0	88.8	79 - 124	18.32	3.09	20	
Chloromethane	14.05	1.0	20	0	70.2	50 - 139	14.13	0.567	20	
cis-1,2-Dichloroethene	24.84	1.0	20	7.166	88.4	78 - 123	25.42	2.31	20	
cis-1,3-Dichloropropene	18.93	1.0	20	0	94.6	75 - 124	18.89	0.195	20	
Dibromochloromethane	18.75	1.0	20	0	93.8	74 - 126	18.71	0.203	20	
Dibromomethane	18.74	1.0	20	0	93.7	79 - 123	19.52	4.09	20	
Dichlorodifluoromethane	16.24	1.0	20	0	81.2	32 - 152	16.4	0.99	20	
Ethylbenzene	19.93	1.0	20	0	99.6	79 - 121	20.25	1.62	20	
Hexachlorobutadiene	24.37	1.0	20	0	122	66 - 134	23.81	2.32	20	
Isopropylbenzene	19.97	1.0	20	0	99.9	72 - 131	20.28	1.52	20	
m,p-Xylene	39.28	2.0	40	0	98.2	80 - 121	39.38	0.261	20	
Methylene chloride	18.25	2.0	20	0	91.3	74 - 124	17.8	2.52	20	
Naphthalene	18.67	1.0	20	0	93.4	61 - 128	16.71	11.1	20	
n-Butylbenzene	21.83	1.0	20	0	109	75 - 128	22.8	4.33	20	
n-Propylbenzene	20.01	1.0	20	0	100	76 - 126	21.19	5.74	20	
o-Xylene	19.18	1.0	20	0	95.9	78 - 122	19.48	1.55	20	
sec-Butylbenzene	20.6	1.0	20	0	103	77 - 126	22.16	7.29	20	
Styrene	19.17	1.0	20	0	95.8	78 - 123	19.31	0.765	20	
tert-Butylbenzene	20.68	1.0	20	0	103	78 - 124	21.7	4.84	20	
Tetrachloroethene	20.58	1.0	20	0	103	74 - 129	21.02	2.11	20	
Toluene	19.07	1.0	20	0	95.3	80 - 121	19.58	2.65	20	
trans-1,2-Dichloroethene	18.54	1.0	20	0	92.7	75 - 124	17.96	3.2	20	
trans-1,3-Dichloropropene	18.67	1.0	20	0	93.3	73 - 127	18.69	0.112	20	
Trichloroethene	20.4	1.0	20	2.069	91.7	79 - 123	22.69	10.6	20	
Trichlorofluoromethane	16.96	1.0	20	0	84.8	65 - 141	17.63	3.91	20	
Vinyl chloride	17.01	1.0	20	0	85.1	58 - 137	17.84	4.73	20	
Surr: 1,2-Dichloroethane-d4	*45.51*	*1.0*	*50*	*0*	*91.0*	*81 - 118*	*44.83*	*1.5*	*20*	
Surr: 4-Bromofluorobenzene	*49*	*1.0*	*50*	*0*	*98.0*	*85 - 114*	*49.81*	*1.65*	*20*	
Surr: Dibromofluoromethane	*45.38*	*1.0*	*50*	*0*	*90.8*	*80 - 119*	*44.9*	*1.07*	*20*	
Surr: Toluene-d8	*50.23*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.65*	*0.831*	*20*	

ALS Houston, US Date: 23-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20120803

QC BATCH REPORT

Batch ID:	**R375144 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch:	HS20120803-01	HS20120803-02

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20120803

QC BATCH REPORT

Batch ID: R375249 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MBLK Sample ID: **MBLK-122220** Units: **mg/L** Analysis Date: **22-Dec-2020 13:32**
Client ID: Run ID: **ICS-Integrion_375249** SeqNo: **5895422** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.205	0.500								J
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-122220** Units: **mg/L** Analysis Date: **22-Dec-2020 13:50**
Client ID: Run ID: **ICS-Integrion_375249** SeqNo: **5895423** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.67	0.500	20	0	98.4	80 - 120				
Sulfate	19.64	0.500	20	0	98.2	80 - 120				

MS Sample ID: **HS20120803-01MS** Units: **mg/L** Analysis Date: **23-Dec-2020 03:26**
Client ID: **LH18/24-SP650_121520** Run ID: **ICS-Integrion_375249** SeqNo: **5895434** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	729	0.500	10	707.9	210	80 - 120				SEO
Sulfate	34.35	0.500	10	23.62	107	80 - 120				

MSD Sample ID: **HS20120803-01MSD** Units: **mg/L** Analysis Date: **23-Dec-2020 03:44**
Client ID: **LH18/24-SP650_121520** Run ID: **ICS-Integrion_375249** SeqNo: **5895435** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	691.4	0.500	10	707.9	-165	80 - 120	729	5.28	20	SEO
Sulfate	32.27	0.500	10	23.62	86.5	80 - 120	34.35	6.25	20	

The following samples were analyzed in this batch: HS20120803-01

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20120803**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 23-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20120803

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120803-01	LH18/24-SP650_121520	Login	12/16/2020 9:48:06 AM	NDR	WET226
HS20120803-01	LH18/24-SP650_121520	Login	12/16/2020 9:48:06 AM	NDR	VOA243
HS20120803-02	Trip Blank	Login	12/16/2020 9:48:06 AM	NDR	VOA243

ALS Houston, US Date: 23-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120803 **Date/Time Received:** **16-Dec-2020 10:40**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Nilesh D. Ranchod* 16-Dec-2020 11:49 **Reviewed by:** */S/ RJ Modashia* 16-Dec-2020 12:14

eSignature Date/Time eSignature Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.4°C UC/C	IR31
Cooler(s)/Kit(s):	46390	
Date/Time sample(s) sent to storage:	12/16/2020 12:20	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT BI-WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O Number

HS20120803
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_121520	Water	12/15/20 / 14:00		3	3		HCL	
LH18/24-SP650_121520	Water	12/15/20 / 14:00		1		1	NONE	
Trip Blank	Water	12/15/20		2	2		HCL	

Additional Remarks: **Standard TAT on other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	12/15/20	14:30							JM	12/16/20	10:40

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks

Cooler # 46390 Temp 4°C 0.4 BR# 31 CIF0-0

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46390

CUSTODY SEAL

Date: 12/15/20 Time: 1430
Name: Scott Beesinger
Company: BHMT&J

Seal Broken By: SBM
Date: 12/16/20

46390 DEC 16 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46390

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINGER
APTIM
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 230CT20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 19x16x13 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-67-BO 74611-RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8881 9590

WED - 16 DEC 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

0475872 12/15 5GBJ2/9196/8766

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

January 11, 2021

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20121203**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

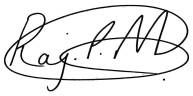
ALS Environmental received 2 sample(s) on Dec 24, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,



Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20121203

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20121203-01	LH18/24-SP650_122220	Water		22-Dec-2020 14:00	24-Dec-2020 11:10	☐
HS20121203-02	LH18/24-SP650_122220-BIX	Water		22-Dec-2020 14:00	24-Dec-2020 11:10	☐

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20121203

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

WetChemistry by Method E350.3

Batch ID: R375627

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R375403

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20121203
Sample ID: LH18/24-SP650_122220
Lab ID:HS20121203-01
Collection Date: 22-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: KVL
Nitrogen, Ammonia (As N)	**7.8**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	30-Dec-2020 12:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**1.96**	a	**0.0500**	**0.125**	**0.125**	**mg/L**	5	24-Dec-2020 12:59
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	11-Jan-2021 15:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.

ANALYTICAL REPORT

Project: Longhorn GW Treatment Plant Weekly Samples

WorkOrder:HS20121203

Sample ID: LH18/24-SP650_122220-BIX

Lab ID:HS20121203-02

Collection Date: 22-Dec-2020 14:00

Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	11-Jan-2021 16:27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20121203

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375403 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20121203-01	LH18/24-SP650_122220	22 Dec 2020 14:00			24 Dec 2020 12:59	5
Batch ID: R375627 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20121203-01	LH18/24-SP650_122220	22 Dec 2020 14:00			30 Dec 2020 12:00	1
Batch ID: R376139 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20121203-01	LH18/24-SP650_122220	22 Dec 2020 14:00			11 Jan 2021 15:53	1
Batch ID: R376143 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20121203-02	LH18/24-SP650_122220-BIX	22 Dec 2020 14:00			11 Jan 2021 16:27	1

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20121203

QC BATCH REPORT

Batch ID: R375403 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-375403** Units: **mg/L** Analysis Date: **24-Dec-2020 12:59**
Client ID: Run ID: **UV-2450_375403** SeqNo: **5898928** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-375403** Units: **mg/L** Analysis Date: **24-Dec-2020 12:59**
Client ID: Run ID: **UV-2450_375403** SeqNo: **5898929** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.248	0.0250	0.25	0	99.2	85 - 115				

LCSD Sample ID: **LCSD-375403** Units: **mg/L** Analysis Date: **24-Dec-2020 12:59**
Client ID: Run ID: **UV-2450_375403** SeqNo: **5898930** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.25	0.0250	0.25	0	100	85 - 115	0.248	0.803	20	

The following samples were analyzed in this batch: HS20121203-01

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20121203

QC BATCH REPORT

Batch ID: R375627 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R375627** Units: **mg/L** Analysis Date: **30-Dec-2020 12:00**
Client ID: Run ID: **WetChem_HS_375627** SeqNo: **5904254** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-R375627** Units: **mg/L** Analysis Date: **30-Dec-2020 12:00**
Client ID: Run ID: **WetChem_HS_375627** SeqNo: **5904253** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.01	0.20	10	0	100	80 - 120				

MS Sample ID: **HS20120802-01MS** Units: **mg/L** Analysis Date: **30-Dec-2020 12:00**
Client ID: Run ID: **WetChem_HS_375627** SeqNo: **5904256** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	13.6	0.20	10	3.347	103	80 - 120				

MSD Sample ID: **HS20120802-01MSD** Units: **mg/L** Analysis Date: **30-Dec-2020 12:00**
Client ID: Run ID: **WetChem_HS_375627** SeqNo: **5904255** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	12.87	0.20	10	3.347	95.2	80 - 120	13.6	5.52	20	

The following samples were analyzed in this batch: HS20121203-01

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20121203**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

ALS Houston, US Date: 11-Jan-21

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20121203

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20121203-01	LH18/24-SP650_122220	Login	12/24/2020 11:59:15 AM	PMG	WET003
HS20121203-01	LH18/24-SP650_122220	Login	12/24/2020 11:59:15 AM	PMG	WET003
HS20121203-01	LH18/24-SP650_122220	Login	12/24/2020 11:59:15 AM	PMG	Sub
HS20121203-02	LH18/24-SP650_122220-BIX	Login	12/24/2020 11:59:15 AM	PMG	Sub

ALS Houston, US Date: 11-Jan-21

Sample Receipt Checklist

Work Order ID: HS20121203 **Date/Time Received:** **24-Dec-2020 11:10**

Client Name: Bhate Environmental **Received by:** **Pablo Marinez**

Completed By: */S/ Paresh M. Giga* (eSignature) 24-Dec-2020 12:00 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 24-Dec-2020 14:42 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.4C U/c	IR25	
Cooler(s)/Kit(s):	Blue		
Date/Time sample(s) sent to storage:	12/24/2020 12:10		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

01019558

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. NWO1312.0150.0 16.0001
Job: **GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES**	
Prepared By: Scott Beesinger	P.O. Number

HS20121203
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_122220	Water	12/22/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_122220	Water	12/22/20 / 14:00		1			X		NONE	
LH18/24–SP650_122220_BIX	Water	12/22/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	12/22/20	14:30	PM 12-24-20	11:10							

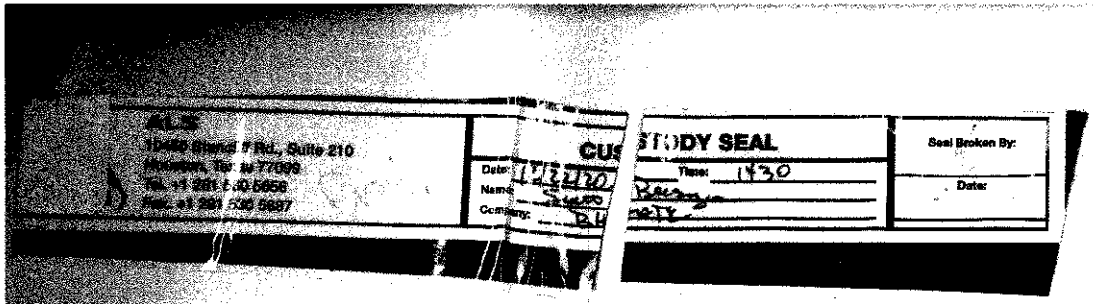
For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

Blue 4.4C IR25 CFO

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly



FedEx.
TRK# 0221 1891 8881 9410

WED - 23 DEC AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FID: 5090257 22Dec2020 GGGA 56DG2/9196/05A2

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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www.alsglobal.com

January 11, 2021

Analytical Report for Service Request No: K2012178

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20121203

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 29, 2020
For your reference, these analyses have been assigned our service request number **K2012178.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20121203
Sample Matrix: Water

Service Request: K2012178
Date Received: 12/29/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 12/29/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by _____ Date 01/11/2021

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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K2012178

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15409**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20121203
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20121203-01**	**LH18/24-SP650_122220**	**Water**	**22 Dec 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			11 Jan 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 12/28/2020 1800

Received By: _____ Date/Time: 12/29/20 1000

Cooler ID(s): _____ Temperature(s): _____

PM KL

Cooler Receipt and Preservation Form

Client AS Houston Service Request K20 12178

Received: 12/29/20 Opened: 12/29/20 By: AP Unloaded: 12/29/20 By: AP

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
1.1	—	IR02	15409	—	—	9473 0838 8248	

6. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2012178
Project:	HS20121203	**Date Collected:**	12/22/20
Sample Matrix:	Water	**Date Received:**	12/29/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_122220	K2012178-001	**0.79**	0.50	0.20	0.07	1	01/07/21 13:18	
Method Blank	K2012178-MB	ND U	0.50	0.20	0.07	1	01/07/21 13:18	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2012178
Project:	HS20121203	**Date Analyzed:**	01/07/21
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	709473

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2012178-LCS	23.9	25.0	96	83-117

January 11, 2021 Service Request No:E2001251

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20121203

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 24, 2020
For your reference, these analyses have been assigned our service request number **E2001251.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001251
Project:	HS20121203	**Date Received:**	12/24/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 12/24/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100008: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001251
Project: HS20121203

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001251-001	LH18/24-SP650_122020-BIX	12/22/2020	1400

Service Request Summary

Folder #: **E2001251**
Client Name: ALS Environmental - US
Project Name: HS20121203
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/24/20
Internal Due Date: 1/11/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20121203
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 6D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001251-001	LH18/24-SP650_122020-BIX	Water	12/22/20 1400	**IV**

Service Request Summary

Folder #: **E2001251**
Client Name: ALS Environmental - US
Project Name: HS20121203
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/24/20
Internal Due Date: 1/11/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20121203
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 6D
Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

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Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15410**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20121203
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20121203-02**	**LH18/24-SP650_122220-BIX**	**Water**	**22 Dec 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			11 Jan 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 12/23/20 1117

Cooler ID(s): _____ Temperature(s): _____

Cooler Receipt Form

ALS Environmental

Project Chemist CG

Client/Project ALS-H

Thermometer ID 1831

Date/Time Received: 12/24/20 Initials: CG

Date/Time Logged in: 12/24/20 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/24/20	1117	CG	1.1	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

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Houston, TX 77099
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F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
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Preparation Information Benchsheet

Prep Run#: 372595 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 1/11/21 08:42

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001251-001	LH18/24-SP650_122020-BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001257-001	LH18/24-SP650_122920-BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100008-001	LH18/24-SP650_010521_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100009-001	LH18/24-SP140_010521	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100010-001	LH18/24-SP650_010521-BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
6	EQ2100008-01	MB		6850/ClO4 DOD			Liquid	10mL	
7	EQ2100008-02	LCS		6850/ClO4 DOD			Liquid	10mL	
8	EQ2100008-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100008-02 1.00µL EQ2100008-03 1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2001251-001 100.00µL EQ2100008-01 100.00µL EQ2100008-02 100.00µL EQ2100008-03 100.00µL

Preparation Steps

Step: Preparation
Started: 1/11/21 08:42
Finished: 1/11/21 09:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 1/11/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001251
Project:	HS20121203	**Date Collected:**	12/22/20 1400
Sample Matrix:	Water	**Date Received:**	12/24/20
Sample Name:	LH18/24-SP650_122020-BIX	**Units:**	µg/L
Lab Code:	E2001251-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.595**		0.500	0.250	0.125	5	1/11/21	1/11/21 15:34	372595	709738	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001251
Project:	HS20121203	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100008-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	1/11/21	1/11/21 14:16	372595	709738	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20121203
Sample Matrix: Water

Service Request: E2001251
Date Analyzed: 1/11/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 372595

	Lab Control Sample EQ2100008-02			Duplicate Lab Control Sample EQ2100008-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0841	0.100	84	0.0909	0.100	91	84 - 119	8	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001251
Project:	HS20121203	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100008-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0841**	J	0.100	0.0500	0.0250	1	1/11/21	1/11/21 15:26	372595	709738	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001251
Project:	HS20121203	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100008-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0909**	J	0.100	0.0500	0.0250	1	1/11/21	1/11/21 14:32	372595	709738	

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January 13, 2021

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20121336**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Dec 30, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20121336

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20121336-01	LH18/24-SP650_122920	Water		29-Dec-2020 14:00	30-Dec-2020 10:25	☐
HS20121336-02	LH18/24-SP650_122920-BIX	Water		29-Dec-2020 14:00	30-Dec-2020 10:25	☐

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20121336

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

WetChemistry by Method E350.3

Batch ID: R375952

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R375682

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20121336
Sample ID: LH18/24-SP650_122920
Lab ID:HS20121336-01
Collection Date: 29-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: YP
Nitrogen, Ammonia (As N)	**4.4**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	06-Jan-2021 13:33
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**1.00**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	30-Dec-2020 11:44
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	12-Jan-2021 16:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20121336
Sample ID: LH18/24-SP650_122920-BIX
Lab ID:HS20121336-02
Collection Date: 29-Dec-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	13-Jan-2021 12:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20121336

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375682 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20121336-01	LH18/24-SP650_122920	29 Dec 2020 14:00			30 Dec 2020 11:44	10
Batch ID: R375952 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20121336-01	LH18/24-SP650_122920	29 Dec 2020 14:00			06 Jan 2021 13:33	1
Batch ID: R376215 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20121336-01	LH18/24-SP650_122920	29 Dec 2020 14:00			12 Jan 2021 16:02	1
Batch ID: R376254 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20121336-02	LH18/24-SP650_122920-BIX	29 Dec 2020 14:00			13 Jan 2021 12:04	1

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20121336

QC BATCH REPORT

Batch ID: R375682 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-375682** Units: **mg/L** Analysis Date: **30-Dec-2020 11:44**
Client ID: Run ID: **UV-2450_375682** SeqNo: **5905563** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-375682** Units: **mg/L** Analysis Date: **30-Dec-2020 11:44**
Client ID: Run ID: **UV-2450_375682** SeqNo: **5905564** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.285	0.0250	0.25	0	114	85 - 115				

MS Sample ID: **HS20121338-01MS** Units: **mg/L** Analysis Date: **30-Dec-2020 11:44**
Client ID: Run ID: **UV-2450_375682** SeqNo: **5905566** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.287	0.0250	0.25	0.005	113	80 - 120				

MSD Sample ID: **HS20121338-01MSD** Units: **mg/L** Analysis Date: **30-Dec-2020 11:44**
Client ID: Run ID: **UV-2450_375682** SeqNo: **5905567** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.287	0.0250	0.25	0.005	113	80 - 120	0.287	0	20	

The following samples were analyzed in this batch: HS20121336-01

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20121336

QC BATCH REPORT

Batch ID: R375952 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R375952** Units: **mg/L** Analysis Date: **06-Jan-2021 13:33**
Client ID: Run ID: **WetChem_HS_375952** SeqNo: **5911640** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-R375952** Units: **mg/L** Analysis Date: **06-Jan-2021 13:33**
Client ID: Run ID: **WetChem_HS_375952** SeqNo: **5911639** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.07	0.20	10	0	101	80 - 120				

MS Sample ID: **HS20121336-01MS** Units: **mg/L** Analysis Date: **06-Jan-2021 13:33**
Client ID: **LH18/24-SP650_122920** Run ID: **WetChem_HS_375952** SeqNo: **5911642** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	15.65	0.20	10	4.429	112	80 - 120				

MSD Sample ID: **HS20121336-01MSD** Units: **mg/L** Analysis Date: **06-Jan-2021 13:33**
Client ID: **LH18/24-SP650_122920** Run ID: **WetChem_HS_375952** SeqNo: **5911641** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	15.13	0.20	10	4.429	107	80 - 120	15.65	3.39	20	

The following samples were analyzed in this batch: HS20121336-01

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20121336**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 13-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20121336

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20121336-01	LH18/24-SP650_122920	Login	12/30/2020 11:11:30 AM	PMG	WET118
HS20121336-01	LH18/24-SP650_122920	Login	12/30/2020 11:11:30 AM	PMG	WET118
HS20121336-01	LH18/24-SP650_122920	Login	12/30/2020 11:11:30 AM	PMG	Sub
HS20121336-02	LH18/24-SP650_122920-BIX	Login	12/30/2020 11:11:30 AM	PMG	Sub

ALS Houston, US Date: 13-Jan-21

Sample Receipt Checklist

Work Order ID: HS20121336 **Date/Time Received:** **30-Dec-2020 10:25**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Paresh M. Giga* (eSignature) 30-Dec-2020 11:12 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 30-Dec-2020 12:26 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:nONE
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.0c U/C	IR31	
Cooler(s)/Kit(s):	43968		
Date/Time sample(s) sent to storage:	12/30/2020 11:20		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20121336
Bhate Environmental Associates. Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_122920	Water	12/29/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_122920	Water	12/29/20 / 14:00		1			X		NONE	
LH18/24–SP650_122920_BIX	Water	12/29/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	12/29/20	14:30	JM	12/30/20	10:25						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

Cooler # 43968 Temp 4°C 2.0 IR# 31 CF 0.0

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

43968

CUSTODY SEAL

Date: 12/29/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By: SM
Date: 12/30/20

43968 DEC 30 2020
DEC 30 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

43968

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09NOV20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 26x14x14 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP - 18/24 - BO - 74789 - RJ
RMA:

FedEx Express

FedEx.
TRK# 0221 1891 8882 6055

WED - 30 DEC AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

169785 29Dec2020 GGGA 56DG2/9196/05A2

January 13, 2021 Service Request No:E2001257

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20121336

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 30, 2020
For your reference, these analyses have been assigned our service request number **E2001257.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001257
Project:	HS20121336	**Date Received:**	12/30/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 12/30/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100008: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001257
Project: HS20121336

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001257-001	LH18/24-SP650_122920-BIX	12/29/2020	1400

Service Request Summary

Folder #: **E2001257**
Client Name: ALS Environmental - US
Project Name: HS20121336
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/30/20
Internal Due Date: 1/14/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20121336
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 6A
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001257-001	LH18/24-SP650_122920-BIX	Ground Water	12/29/20 1400	**IV**

Service Request Summary

Folder #: **E2001257**
Client Name: ALS Environmental - US
Project Name: HS20121336
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/30/20
Internal Due Date: 1/14/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20121336
EDD: No EDD Specified

1 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 6A
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	II Due 1/14,IV due 1/21

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15424**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20121336
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20121336-02**	**LH18/24-SP650_122920-BIX**	**Water**	**29 Dec 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			14 Jan 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

E2001257 5
ALS Laboratory Group
HS20121336

Relinquished By: J. Modashia Date/Time: 12/30/20 12:25

Received By: FedEx Date/Time: 12/30/20 12:25

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1831

Date/Time Received: 12/30/20 Initials: CH

Date/Time Logged in: 12/30/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/30/20	1225	CH	1.8	✓
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2001257 5

ALS Laboratory Group HS20121336

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 372595 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 1/11/21 08:42

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001251-001	LH18/24-SP650_122020-BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001257-001	LH18/24-SP650_122920-BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2100008-001	LH18/24-SP650_010521_BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2100009-001	LH18/24-SP140_010521	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2100010-001	LH18/24-SP650_010521-BIX	.01	6850/ClO4 DOD			Ground Water	10mL	
6	EQ2100008-01	MB		6850/ClO4 DOD			Liquid	10mL	
7	EQ2100008-02	LCS		6850/ClO4 DOD			Liquid	10mL	
8	EQ2100008-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2100008-02 1.00µL EQ2100008-03 1.00µL

Name: Perchlorate Internal Standard 1ug/mL Inventory ID 214820 Logbook Ref: Perchlorate Internal Standard Expires On: 07/03/2021

E2001251-001 100.00µL EQ2100008-01 100.00µL EQ2100008-02 100.00µL EQ2100008-03 100.00µL

Preparation Steps

Step: Preparation
Started: 1/11/21 08:42
Finished: 1/11/21 09:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 1/11/21

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001257
Project:	HS20121336	**Date Collected:**	12/29/20 1400
Sample Matrix:	Ground Water	**Date Received:**	12/30/20
Sample Name:	LH18/24-SP650_122920-BIX	**Units:**	µg/L
Lab Code:	E2001257-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.292**	J	0.500	0.250	0.125	5	1/11/21	1/11/21 16:41	372595	709738	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001257
Project:	HS20121336	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2100008-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	1/11/21	1/11/21 14:16	372595	709738	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20121336
Sample Matrix: Ground Water

Service Request: E2001257
Date Analyzed: 1/11/21

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 372595

	Lab Control Sample EQ2100008-02			Duplicate Lab Control Sample EQ2100008-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0841	0.100	84	0.0909	0.100	91	84 - 119	8	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001257
Project:	HS20121336	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100008-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0841**	J	0.100	0.0500	0.0250	1	1/11/21	1/11/21 15:26	372595	709738	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001257
Project:	HS20121336	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2100008-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0909**	J	0.100	0.0500	0.0250	1	1/11/21	1/11/21 14:32	372595	709738	

ALS Environmental
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January 11, 2021

Analytical Report for Service Request No: K2100116

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20121336

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory January 06, 2021
For your reference, these analyses have been assigned our service request number **K2100116.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20121336
Sample Matrix: Water

Service Request: K2100116
Date Received: 01/06/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 01/06/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by _____ Date 01/11/2021

Chain of Custody

ALS Environmental—Kelso Laboratory
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K2100116

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15423**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20121336
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20121336-01**	**LH18/24-SP650_122920**	**Water**	**29 Dec 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			14 Jan 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 1/4/2021 18:00

Received By: K Morrow ALS Kelso Date/Time: 1/6/21 1230

Cooler ID(s): _____ Temperature(s): _____

PM KL

Cooler Receipt and Preservation Form

Client ALS- Houston Service Request K21 00116

Received: 1/6/21 Opened: 1/6/21 By: [signature] Unloaded: 1/6/21 By: [signature]

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
0.9	—	IR01	15423	—	—	9743 0838 9974 78	

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2100116
Project:	HS20121336	**Date Collected:**	12/29/20
Sample Matrix:	Water	**Date Received:**	01/6/21
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_122920	K2100116-001	**0.71**	0.50	0.20	0.07	1	01/07/21 13:18	
Method Blank	K2100116-MB	ND U	0.50	0.20	0.07	1	01/07/21 13:18	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2100116
Project:	HS20121336	**Date Analyzed:**	01/07/21
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	709473

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2100116-LCS	23.9	25.0	96	83-117

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January 11, 2021

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20121361**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Dec 30, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20121361

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20121361-01	LH18/24-SP650_122920	Water		29-Dec-2020 14:00	30-Dec-2020 10:25	☐
HS20121361-02	Trip Blank	Water	CG-102720-261	29-Dec-2020 00:00	30-Dec-2020 10:25	☐

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20121361

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R376124

Sample ID: LH18/24-SP650_122920(HS20121361-01MS)

- The recovery of the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD) was outside of the established control limit due to suspect matrix effect. tert-Butylbenzene

The RPD between the MS and MSD was outside of the control limit. 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Naphthalene

WetChemistry by Method SW9056

Batch ID: R375956

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20121361
Sample ID: LH18/24-SP650_122920 Lab ID:HS20121361-01
Collection Date: 29-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 20:09
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 20:09
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	07-Jan-2021 20:09
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	07-Jan-2021 20:09
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 20:09
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	07-Jan-2021 20:09
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 20:09
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 20:09
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 20:09
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	07-Jan-2021 20:09
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 20:09
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	07-Jan-2021 20:09
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 20:09
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 20:09
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	07-Jan-2021 20:09
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	07-Jan-2021 20:09
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 20:09
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	07-Jan-2021 20:09
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20121361
Sample ID: LH18/24-SP650_122920 Lab ID:HS20121361-01
Collection Date: 29-Dec-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
cis-1,2-Dichloroethene	**6.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	07-Jan-2021 20:09
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 20:09
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	07-Jan-2021 20:09
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	07-Jan-2021 20:09
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	07-Jan-2021 20:09
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 20:09
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Trichloroethene	**2.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	07-Jan-2021 20:09
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 20:09
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 20:09
Surr: 1,2-Dichloroethane-d4	*89.8*			**0**	*81-118*	*%REC*	*1*	*07-Jan-2021 20:09*
Surr: 4-Bromofluorobenzene	*103*			**0**	*85-114*	*%REC*	*1*	*07-Jan-2021 20:09*
Surr: Dibromofluoromethane	*92.3*			**0**	*80-119*	*%REC*	*1*	*07-Jan-2021 20:09*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*07-Jan-2021 20:09*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**705**		**4.00**	**10.0**	**10.0**	**mg/L**	20	06-Jan-2021 02:58
Sulfate	**22.8**		**0.200**	**0.500**	**0.500**	**mg/L**	1	06-Jan-2021 02:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20121361

Sample ID: Trip Blank Lab ID:HS20121361-02

Collection Date: 29-Dec-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 19:48
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	07-Jan-2021 19:48
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	07-Jan-2021 19:48
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	07-Jan-2021 19:48
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 19:48
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 19:48
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	07-Jan-2021 19:48
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	07-Jan-2021 19:48
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 19:48
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	07-Jan-2021 19:48
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	07-Jan-2021 19:48
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 19:48
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	07-Jan-2021 19:48
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20121361
Sample ID: Trip Blank
Lab ID:HS20121361-02
Collection Date: 29-Dec-2020 00:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	07-Jan-2021 19:48
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	07-Jan-2021 19:48
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	07-Jan-2021 19:48
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	07-Jan-2021 19:48
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	07-Jan-2021 19:48
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	07-Jan-2021 19:48
Surr: 1,2-Dichloroethane-d4	*89.4*			**0**	*81-118*	*%REC*	*1*	*07-Jan-2021 19:48*
Surr: 4-Bromofluorobenzene	*104*			**0**	*85-114*	*%REC*	*1*	*07-Jan-2021 19:48*
Surr: Dibromofluoromethane	*92.0*			**0**	*80-119*	*%REC*	*1*	*07-Jan-2021 19:48*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*07-Jan-2021 19:48*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375956 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20121361-01	LH18/24-SP650_122920	29 Dec 2020 14:00			06 Jan 2021 02:58	20
HS20121361-01	LH18/24-SP650_122920	29 Dec 2020 14:00			06 Jan 2021 02:39	1
Batch ID: R376124 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20121361-01	LH18/24-SP650_122920	29 Dec 2020 14:00			07 Jan 2021 20:09	1
HS20121361-02	Trip Blank	29 Dec 2020 00:00			07 Jan 2021 19:48	1

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R376124 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210107** Units: **ug/L** Analysis Date: **07-Jan-2021 17:42**
Client ID: Run ID: **VOA6_376124** SeqNo: **5915008** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R376124 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210107** Units: **ug/L** Analysis Date: **07-Jan-2021 17:42**
Client ID: Run ID: **VOA6_376124** SeqNo: **5915008** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.41*	*1.0*	*50*	*0*	*90.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.83*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*47.2*	*1.0*	*50*	*0*	*94.4*	*80 - 119*				
Surr: Toluene-d8	*52.35*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R376124 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-210107** Units: **ug/L** Analysis Date: **07-Jan-2021 16:39**
Client ID: Run ID: **VOA6_376124** SeqNo: **5915007** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.3	1.0	20	0	96.5	78 - 124				
1,1,1-Trichloroethane	19.44	1.0	20	0	97.2	74 - 131				
1,1,2,2-Tetrachloroethane	17.44	1.0	20	0	87.2	71 - 121				
1,1,2-Trichloroethane	18.2	1.0	20	0	91.0	80 - 119				
1,1-Dichloroethane	18.31	1.0	20	0	91.5	77 - 125				
1,1-Dichloroethene	18.49	1.0	20	0	92.4	71 - 131				
1,1-Dichloropropene	18.56	1.0	20	0	92.8	78 - 125				
1,2,3-Trichlorobenzene	22	1.0	20	0	110	69 - 129				
1,2,3-Trichloropropane	17.43	1.0	20	0	87.2	73 - 122				
1,2,4-Trichlorobenzene	20.92	1.0	20	0	105	69 - 130				
1,2,4-Trimethylbenzene	19.05	1.0	20	0	95.2	76 - 124				
1,2-Dibromo-3-chloropropane	17.95	1.0	20	0	89.8	62 - 128				
1,2-Dibromoethane	18.69	1.0	20	0	93.4	77 - 121				
1,2-Dichlorobenzene	18.92	1.0	20	0	94.6	80 - 119				
1,2-Dichloroethane	17.74	1.0	20	0	88.7	73 - 128				
1,2-Dichloropropane	18.38	1.0	20	0	91.9	78 - 122				
1,3,5-Trimethylbenzene	18.39	1.0	20	0	91.9	75 - 124				
1,3-Dichlorobenzene	19.11	1.0	20	0	95.5	80 - 119				
1,3-Dichloropropane	18.29	1.0	20	0	91.4	80 - 119				
1,4-Dichlorobenzene	18.9	1.0	20	0	94.5	79 - 118				
2,2-Dichloropropane	19.57	1.0	20	0	97.8	60 - 139				
2-Butanone	37.31	2.0	40	0	93.3	56 - 143				
2-Chlorotoluene	18.1	1.0	20	0	90.5	79 - 122				
2-Hexanone	34.5	2.0	40	0	86.2	57 - 139				
4-Chlorotoluene	17.83	1.0	20	0	89.2	78 - 122				
4-Isopropyltoluene	18.88	1.0	20	0	94.4	77 - 127				
4-Methyl-2-pentanone	34.85	2.0	40	0	87.1	67 - 130				
Acetone	37.27	2.0	40	0	93.2	39 - 160				
Benzene	18.83	1.0	20	0	94.2	79 - 120				
Bromobenzene	19.02	1.0	20	0	95.1	80 - 120				
Bromochloromethane	19.29	1.0	20	0	96.5	78 - 123				
Bromodichloromethane	18.15	1.0	20	0	90.7	79 - 125				
Bromoform	19.55	1.0	20	0	97.7	66 - 130				
Bromomethane	22.64	1.0	20	0	113	53 - 141				

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R376124 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-210107** Units: **ug/L** Analysis Date: **07-Jan-2021 16:39**
Client ID: Run ID: **VOA6_376124** SeqNo: **5915007** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	38.5	2.0	40	0	96.3	64 - 133				
Carbon tetrachloride	18.17	1.0	20	0	90.9	72 - 136				
Chlorobenzene	18.8	1.0	20	0	94.0	82 - 118				
Chloroethane	17.5	1.0	20	0	87.5	60 - 138				
Chloroform	18.92	1.0	20	0	94.6	79 - 124				
Chloromethane	18.79	1.0	20	0	94.0	50 - 139				
cis-1,2-Dichloroethene	19.6	1.0	20	0	98.0	78 - 123				
cis-1,3-Dichloropropene	19.21	1.0	20	0	96.0	75 - 124				
Dibromochloromethane	18.74	1.0	20	0	93.7	74 - 126				
Dibromomethane	18.58	1.0	20	0	92.9	79 - 123				
Dichlorodifluoromethane	19.98	1.0	20	0	99.9	32 - 152				
Ethylbenzene	19.01	1.0	20	0	95.1	79 - 121				
Hexachlorobutadiene	21.96	1.0	20	0	110	66 - 134				
Isopropylbenzene	19.47	1.0	20	0	97.4	72 - 131				
m,p-Xylene	38.85	2.0	40	0	97.1	80 - 121				
Methylene chloride	19.06	2.0	20	0	95.3	74 - 124				
Naphthalene	21.63	1.0	20	0	108	61 - 128				
n-Butylbenzene	19.21	1.0	20	0	96.0	75 - 128				
n-Propylbenzene	18.74	1.0	20	0	93.7	76 - 126				
o-Xylene	19.05	1.0	20	0	95.2	78 - 122				
sec-Butylbenzene	18.93	1.0	20	0	94.7	77 - 126				
Styrene	19.2	1.0	20	0	96.0	78 - 123				
tert-Butylbenzene	23.09	1.0	20	0	115	78 - 124				
Tetrachloroethene	19.38	1.0	20	0	96.9	74 - 129				
Toluene	18.82	1.0	20	0	94.1	80 - 121				
trans-1,2-Dichloroethene	19.41	1.0	20	0	97.1	75 - 124				
trans-1,3-Dichloropropene	19.03	1.0	20	0	95.1	73 - 127				
Trichloroethene	19.27	1.0	20	0	96.4	79 - 123				
Trichlorofluoromethane	18.82	1.0	20	0	94.1	65 - 141				
Vinyl chloride	18.33	1.0	20	0	91.6	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.8*	*1.0*	*50*	*0*	*97.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.68*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*49.62*	*1.0*	*50*	*0*	*99.2*	*80 - 119*				
Surr: Toluene-d8	*48.71*	*1.0*	*50*	*0*	*97.4*	*89 - 112*				

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R376124 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20121361-01MS** Units: **ug/L** Analysis Date: **07-Jan-2021 20:30**
Client ID: **LH18/24-SP650_122920** Run ID: **VOA6_376124** SeqNo: **5915012** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.55	1.0	20	0	97.8	78 - 124				
1,1,1-Trichloroethane	18.8	1.0	20	0	94.0	74 - 131				
1,1,2,2-Tetrachloroethane	18.1	1.0	20	0	90.5	71 - 121				
1,1,2-Trichloroethane	18.41	1.0	20	0	92.1	80 - 119				
1,1-Dichloroethane	17	1.0	20	0	85.0	77 - 125				
1,1-Dichloroethene	19.36	1.0	20	0	96.8	71 - 131				
1,1-Dichloropropene	19.26	1.0	20	0	96.3	78 - 125				
1,2,3-Trichlorobenzene	16.09	1.0	20	0	80.4	69 - 129				
1,2,3-Trichloropropane	17.57	1.0	20	0	87.9	73 - 122				
1,2,4-Trichlorobenzene	15.88	1.0	20	0	79.4	69 - 130				
1,2,4-Trimethylbenzene	20.08	1.0	20	0	100	76 - 124				
1,2-Dibromo-3-chloropropane	16.74	1.0	20	0	83.7	62 - 128				
1,2-Dibromoethane	18.71	1.0	20	0	93.5	77 - 121				
1,2-Dichlorobenzene	19.36	1.0	20	0	96.8	80 - 119				
1,2-Dichloroethane	17.59	1.0	20	0	87.9	73 - 128				
1,2-Dichloropropane	18.32	1.0	20	0	91.6	78 - 122				
1,3,5-Trimethylbenzene	20.15	1.0	20	0	101	75 - 124				
1,3-Dichlorobenzene	19.74	1.0	20	0	98.7	80 - 119				
1,3-Dichloropropane	18.25	1.0	20	0	91.3	80 - 119				
1,4-Dichlorobenzene	19.49	1.0	20	0	97.5	79 - 118				
2,2-Dichloropropane	18.4	1.0	20	0	92.0	60 - 139				
2-Butanone	30.72	2.0	40	0	76.8	56 - 143				
2-Chlorotoluene	19.71	1.0	20	0	98.6	79 - 122				
2-Hexanone	31.71	2.0	40	0	79.3	57 - 139				
4-Chlorotoluene	19.4	1.0	20	0	97.0	78 - 122				
4-Isopropyltoluene	20.55	1.0	20	0	103	77 - 127				
4-Methyl-2-pentanone	34.97	2.0	40	0	87.4	67 - 130				
Acetone	27.77	2.0	40	0	69.4	39 - 160				
Benzene	19.07	1.0	20	0	95.4	79 - 120				
Bromobenzene	20.53	1.0	20	0	103	80 - 120				
Bromochloromethane	17.83	1.0	20	0	89.1	78 - 123				
Bromodichloromethane	17.89	1.0	20	0	89.4	79 - 125				
Bromoform	18.72	1.0	20	0	93.6	66 - 130				
Bromomethane	21.54	1.0	20	0	108	53 - 141				

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R376124 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20121361-01MS** Units: **ug/L** Analysis Date: **07-Jan-2021 20:30**
Client ID: **LH18/24-SP650_122920** Run ID: **VOA6_376124** SeqNo: **5915012** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.19	2.0	40	0	93.0	64 - 133				
Carbon tetrachloride	20.51	1.0	20	0	103	72 - 136				
Chlorobenzene	19.6	1.0	20	0	98.0	82 - 118				
Chloroethane	18.85	1.0	20	0	94.3	60 - 138				
Chloroform	17.35	1.0	20	0	86.8	79 - 124				
Chloromethane	19.94	1.0	20	0	99.7	50 - 139				
cis-1,2-Dichloroethene	24.78	1.0	20	6.826	89.8	78 - 123				
cis-1,3-Dichloropropene	18.24	1.0	20	0	91.2	75 - 124				
Dibromochloromethane	17.94	1.0	20	0	89.7	74 - 126				
Dibromomethane	18.12	1.0	20	0	90.6	79 - 123				
Dichlorodifluoromethane	21.03	1.0	20	0	105	32 - 152				
Ethylbenzene	20.38	1.0	20	0	102	79 - 121				
Hexachlorobutadiene	19.75	1.0	20	0	98.8	66 - 134				
Isopropylbenzene	21.28	1.0	20	0	106	72 - 131				
m,p-Xylene	41.25	2.0	40	0	103	80 - 121				
Methylene chloride	17.39	2.0	20	0	86.9	74 - 124				
Naphthalene	15.46	1.0	20	0	77.3	61 - 128				
n-Butylbenzene	20.58	1.0	20	0	103	75 - 128				
n-Propylbenzene	20.8	1.0	20	0	104	76 - 126				
o-Xylene	19.91	1.0	20	0	99.6	78 - 122				
sec-Butylbenzene	21.06	1.0	20	0	105	77 - 126				
Styrene	19.67	1.0	20	0	98.4	78 - 123				
tert-Butylbenzene	25.32	1.0	20	0	127	78 - 124				S
Tetrachloroethene	20.69	1.0	20	0	103	74 - 129				
Toluene	19.88	1.0	20	0	99.4	80 - 121				
trans-1,2-Dichloroethene	18.59	1.0	20	0	93.0	75 - 124				
trans-1,3-Dichloropropene	18.07	1.0	20	0	90.3	73 - 127				
Trichloroethene	21.49	1.0	20	2.121	96.9	79 - 123				
Trichlorofluoromethane	20.61	1.0	20	0	103	65 - 141				
Vinyl chloride	20.31	1.0	20	0	102	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.31*	*1.0*	*50*	*0*	*88.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.62*	*1.0*	*50*	*0*	*105*	*85 - 114*				
Surr: Dibromofluoromethane	*46.46*	*1.0*	*50*	*0*	*92.9*	*80 - 119*				
Surr: Toluene-d8	*51.56*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R376124 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20121361-01MSD** Units: **ug/L** Analysis Date: **07-Jan-2021 20:51**
Client ID: **LH18/24-SP650_122920** Run ID: **VOA6_376124** SeqNo: **5915013** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.11	1.0	20	0	101	78 - 124	19.55	2.85	20	
1,1,1-Trichloroethane	18.62	1.0	20	0	93.1	74 - 131	18.8	0.922	20	
1,1,2,2-Tetrachloroethane	19.75	1.0	20	0	98.7	71 - 121	18.1	8.7	20	
1,1,2-Trichloroethane	18.93	1.0	20	0	94.6	80 - 119	18.41	2.76	20	
1,1-Dichloroethane	16.74	1.0	20	0	83.7	77 - 125	17	1.55	20	
1,1-Dichloroethene	17.54	1.0	20	0	87.7	71 - 131	19.36	9.84	20	
1,1-Dichloropropene	18.46	1.0	20	0	92.3	78 - 125	19.26	4.26	20	
1,2,3-Trichlorobenzene	20.03	1.0	20	0	100	69 - 129	16.09	21.8	20	R
1,2,3-Trichloropropane	19.14	1.0	20	0	95.7	73 - 122	17.57	8.54	20	
1,2,4-Trichlorobenzene	19.84	1.0	20	0	99.2	69 - 130	15.88	22.2	20	R
1,2,4-Trimethylbenzene	20.8	1.0	20	0	104	76 - 124	20.08	3.53	20	
1,2-Dibromo-3-chloropropane	18.2	1.0	20	0	91.0	62 - 128	16.74	8.38	20	
1,2-Dibromoethane	19.24	1.0	20	0	96.2	77 - 121	18.71	2.8	20	
1,2-Dichlorobenzene	20.64	1.0	20	0	103	80 - 119	19.36	6.4	20	
1,2-Dichloroethane	17.66	1.0	20	0	88.3	73 - 128	17.59	0.4	20	
1,2-Dichloropropane	17.64	1.0	20	0	88.2	78 - 122	18.32	3.74	20	
1,3,5-Trimethylbenzene	20.8	1.0	20	0	104	75 - 124	20.15	3.19	20	
1,3-Dichlorobenzene	20.52	1.0	20	0	103	80 - 119	19.74	3.9	20	
1,3-Dichloropropane	18.71	1.0	20	0	93.6	80 - 119	18.25	2.48	20	
1,4-Dichlorobenzene	20.3	1.0	20	0	102	79 - 118	19.49	4.08	20	
2,2-Dichloropropane	17.27	1.0	20	0	86.4	60 - 139	18.4	6.32	20	
2-Butanone	32.23	2.0	40	0	80.6	56 - 143	30.72	4.79	20	
2-Chlorotoluene	19.6	1.0	20	0	98.0	79 - 122	19.71	0.548	20	
2-Hexanone	34.87	2.0	40	0	87.2	57 - 139	31.71	9.5	20	
4-Chlorotoluene	19.99	1.0	20	0	100.0	78 - 122	19.4	2.99	20	
4-Isopropyltoluene	21.25	1.0	20	0	106	77 - 127	20.55	3.31	20	
4-Methyl-2-pentanone	34.96	2.0	40	0	87.4	67 - 130	34.97	0.0164	20	
Acetone	30.59	2.0	40	0	76.5	39 - 160	27.77	9.66	20	
Benzene	18.31	1.0	20	0	91.6	79 - 120	19.07	4.08	20	
Bromobenzene	20.74	1.0	20	0	104	80 - 120	20.53	1.02	20	
Bromochloromethane	17.7	1.0	20	0	88.5	78 - 123	17.83	0.741	20	
Bromodichloromethane	17.79	1.0	20	0	89.0	79 - 125	17.89	0.537	20	
Bromoform	20.37	1.0	20	0	102	66 - 130	18.72	8.46	20	
Bromomethane	19.82	1.0	20	0	99.1	53 - 141	21.54	8.32	20	

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R376124 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20121361-01MSD** Units: **ug/L** Analysis Date: **07-Jan-2021 20:51**
Client ID: **LH18/24-SP650_122920** Run ID: **VOA6_376124** SeqNo: **5915013** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	35.57	2.0	40	0	88.9	64 - 133	37.19	4.46	20	
Carbon tetrachloride	19.52	1.0	20	0	97.6	72 - 136	20.51	4.98	20	
Chlorobenzene	19.31	1.0	20	0	96.5	82 - 118	19.6	1.5	20	
Chloroethane	17.92	1.0	20	0	89.6	60 - 138	18.85	5.06	20	
Chloroform	17.09	1.0	20	0	85.5	79 - 124	17.35	1.51	20	
Chloromethane	18.74	1.0	20	0	93.7	50 - 139	19.94	6.21	20	
cis-1,2-Dichloroethene	23.97	1.0	20	6.826	85.7	78 - 123	24.78	3.31	20	
cis-1,3-Dichloropropene	17.7	1.0	20	0	88.5	75 - 124	18.24	3	20	
Dibromochloromethane	18.75	1.0	20	0	93.8	74 - 126	17.94	4.43	20	
Dibromomethane	18.38	1.0	20	0	91.9	79 - 123	18.12	1.4	20	
Dichlorodifluoromethane	20.9	1.0	20	0	105	32 - 152	21.03	0.58	20	
Ethylbenzene	19.98	1.0	20	0	99.9	79 - 121	20.38	1.95	20	
Hexachlorobutadiene	21.01	1.0	20	0	105	66 - 134	19.75	6.15	20	
Isopropylbenzene	20.8	1.0	20	0	104	72 - 131	21.28	2.28	20	
m,p-Xylene	39.7	2.0	40	0	99.3	80 - 121	41.25	3.81	20	
Methylene chloride	17.02	2.0	20	0	85.1	74 - 124	17.39	2.17	20	
Naphthalene	19.28	1.0	20	0	96.4	61 - 128	15.46	22	20	R
n-Butylbenzene	21.17	1.0	20	0	106	75 - 128	20.58	2.8	20	
n-Propylbenzene	20.46	1.0	20	0	102	76 - 126	20.8	1.67	20	
o-Xylene	19.61	1.0	20	0	98.1	78 - 122	19.91	1.51	20	
sec-Butylbenzene	21.14	1.0	20	0	106	77 - 126	21.06	0.399	20	
Styrene	20.13	1.0	20	0	101	78 - 123	19.67	2.31	20	
tert-Butylbenzene	25.77	1.0	20	0	129	78 - 124	25.32	1.75	20	S
Tetrachloroethene	20.66	1.0	20	0	103	74 - 129	20.69	0.13	20	
Toluene	19.54	1.0	20	0	97.7	80 - 121	19.88	1.72	20	
trans-1,2-Dichloroethene	17.73	1.0	20	0	88.7	75 - 124	18.59	4.76	20	
trans-1,3-Dichloropropene	17.78	1.0	20	0	88.9	73 - 127	18.07	1.64	20	
Trichloroethene	20.81	1.0	20	2.121	93.5	79 - 123	21.49	3.2	20	
Trichlorofluoromethane	18.99	1.0	20	0	94.9	65 - 141	20.61	8.19	20	
Vinyl chloride	19.19	1.0	20	0	96.0	58 - 137	20.31	5.66	20	
Surr: 1,2-Dichloroethane-d4	*44.39*	*1.0*	*50*	*0*	*88.8*	*81 - 118*	*44.31*	*0.178*	*20*	
Surr: 4-Bromofluorobenzene	*51.89*	*1.0*	*50*	*0*	*104*	*85 - 114*	*52.62*	*1.41*	*20*	
Surr: Dibromofluoromethane	*46.53*	*1.0*	*50*	*0*	*93.1*	*80 - 119*	*46.46*	*0.149*	*20*	
Surr: Toluene-d8	*51.45*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.56*	*0.226*	*20*	

ALS Houston, US Date: 11-Jan-21

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20121361

QC BATCH REPORT

Batch ID:	**R376124 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20121361-01 HS20121361-02

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R375956 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-010521** Units: **mg/L** Analysis Date: **05-Jan-2021 10:34**
Client ID: Run ID: **ICS-Integrion_375956** SeqNo: **5911688** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-010521** Units: **mg/L** Analysis Date: **05-Jan-2021 10:52**
Client ID: Run ID: **ICS-Integrion_375956** SeqNo: **5911689** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.18	0.500	20	0	101	80 - 120				
Sulfate	20.15	0.500	20	0	101	80 - 120				

MS Sample ID: **HS20121232-02MS** Units: **mg/L** Analysis Date: **06-Jan-2021 00:15**
Client ID: Run ID: **ICS-Integrion_375956** SeqNo: **5911713** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	49.25	0.500	10	39.65	96.0	80 - 120				
Sulfate	55.13	0.500	10	45.48	96.5	80 - 120				O

MS Sample ID: **HS20121182-04MS** Units: **mg/L** Analysis Date: **05-Jan-2021 18:49**
Client ID: Run ID: **ICS-Integrion_375956** SeqNo: **5911696** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	77.08	0.500	10	67.77	93.1	80 - 120				O
Sulfate	33.1	0.500	10	23.21	98.9	80 - 120				

MSD Sample ID: **HS20121232-02MSD** Units: **mg/L** Analysis Date: **06-Jan-2021 00:33**
Client ID: Run ID: **ICS-Integrion_375956** SeqNo: **5911714** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	49.55	0.500	10	39.65	99.0	80 - 120	49.25	0.611	20	
Sulfate	55.55	0.500	10	45.48	101	80 - 120	55.13	0.769	20	O

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20121361

QC BATCH REPORT

Batch ID: R375956 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MSD Sample ID: **HS20121182-04MSD** Units: **mg/L** Analysis Date: **05-Jan-2021 19:07**
Client ID: Run ID: **ICS-Integrion_375956** SeqNo: **5911697** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	77.48	0.500	10	67.77	97.1	80 - 120	77.08	0.52	20	O
Sulfate	33.4	0.500	10	23.21	102	80 - 120	33.1	0.903	20	

The following samples were analyzed in this batch: HS20121361-01

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20121361**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 11-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20121361

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20121361-01	LH18/24-SP650_122920	Login	12/30/2020 5:15:13 PM	PMG	WET003
HS20121361-01	LH18/24-SP650_122920	Login	12/30/2020 5:15:13 PM	PMG	VOA063
HS20121361-02	Trip Blank	Login	12/30/2020 5:15:13 PM	PMG	VOA063

ALS Houston, US Date: 11-Jan-21

Sample Receipt Checklist

Work Order ID: HS20121361 **Date/Time Received:** **30-Dec-2020 10:25**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Paresh M. Giga* 30-Dec-2020 17:16 **Reviewed by:** */S/ RJ Modashia* 31-Dec-2020 08:52

eSignature Date/Time eSignature Date/Time

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.0C U/c	IR31	
Cooler(s)/Kit(s):	43968		
Date/Time sample(s) sent to storage:	12/30/2020 17:25		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job:
GROUNDWATER TREATMENT PLANT BI-WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O Number

HS20121361
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_122920	Water	12/29/20 / 14:00		3	3		HCL	
LH18/24-SP650_122920	Water	12/29/20 / 14:00		1		1	NONE	
Trip Blank	Water	12/29/20		2	2		HCL	

Additional Remarks: **Standard TAT on other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	12/29/20	14:30	JM	12/30/20	10.25						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks

Cooler # 43968 Temp 4/C 3R#31
2.0 cFo.o

(Word) S:\t-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

43968

CUSTODY SEAL

Date: 12/29/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 12/30/20

43968 DEC 30 2020
DEC 30 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

43968

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09NOV20
ACTWGT: 1.00 LB MAN
CAD: 380130/CAFE3211
DIMS: 26x14x14 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-18/24-B0-74789-RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1891 8882 6055

WED - 30 DEC AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

December 29, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120486**

Laboratory Results for: **LHAAP 18 24**

Dear Marcia Olive,

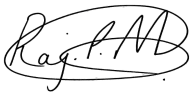
ALS Environmental received 10 sample(s) on Dec 09, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,



Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120486

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120486-01	MW5_120820	Groundwater		08-Dec-2020 07:25	09-Dec-2020 10:50	☐
HS20120486-02	18CPTMW08DW_120820	Groundwater		08-Dec-2020 08:15	09-Dec-2020 10:50	☐
HS20120486-03	18CTPMW08SW_120820	Groundwater		08-Dec-2020 09:00	09-Dec-2020 10:50	☐
HS20120486-04	18CTPMW08SW_120820_a	Groundwater		08-Dec-2020 09:00	09-Dec-2020 10:50	☐
HS20120486-05	MW23_120820	Groundwater		08-Dec-2020 09:50	09-Dec-2020 10:50	☐
HS20120486-06	MW16_120820	Groundwater		08-Dec-2020 10:35	09-Dec-2020 10:50	☐
HS20120486-07	18CPTMW23_120820	Groundwater		08-Dec-2020 11:25	09-Dec-2020 10:50	☐
HS20120486-08	18WW24_120820	Groundwater		08-Dec-2020 12:10	09-Dec-2020 10:50	☐
HS20120486-09	18CTPMW15_120820	Groundwater		08-Dec-2020 13:00	09-Dec-2020 10:50	☐
HS20120486-10	Trip Blank	Water	CG 102720 -262	08-Dec-2020 00:00	09-Dec-2020 10:50	☐

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120486

CASE NARRATIVE

Work Order Comments

- The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160571

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R375002

Sample ID: CCV

- 1,2-Dibromo-3-Chloropropane exceeded %D limits for CCV. Samples are ND for this compound.

Sample ID: VLCSW-201218

- 1,2,3-Trichlorobenzene exceeded QC limits for LCS. Samples are ND for this compound.

Metals by Method SW6020

Batch ID: 160930

Sample ID: 18WW24_120820 (HS20120486-08MS)

- Aluminum, Nickel, Zinc failed for MS/MSD but passed for PDS.
- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Calcium, Magnesium, Sodium, Manganese

Sample ID: 18WW24_120820 (HS20120486-08PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium

Metals by Method SW7470

Batch ID: 160855

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW5_120820
Collection Date: 08-Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,1-Dichloroethane	**2.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 18:44
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 18:44
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 18:44
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 18:44
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 18:44
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 18:44
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 18:44
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 18:44
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 18:44
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 18:44
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 18:44
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 18:44
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 18:44
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 18:44
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 18:44
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW5_120820
Collection Date: 08-Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
cis-1,2-Dichloroethene	**8.6**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 18:44
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 18:44
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 18:44
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 18:44
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 18:44
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 18:44
Trichloroethene	**34**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 18:44
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 18:44
Vinyl chloride	**2.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 18:44
Surr: 1,2-Dichloroethane-d4	*88.4*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 18:44*
Surr: 4-Bromofluorobenzene	*94.8*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 18:44*
Surr: Dibromofluoromethane	*86.3*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 18:44*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 18:44*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.077**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 14:56
Surr: 2-Fluorobiphenyl	*81.8*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 14:56*
Surr: 4-Terphenyl-d14	*111*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 14:56*
Surr: Nitrobenzene-d5	*64.1*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 14:56*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW5_120820
Collection Date: 08-Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Aluminum	**0.0137**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	24-Dec-2020 11:23
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 11:23
Arsenic	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 11:23
Barium	**0.764**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:23
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:23
Cadmium	**0.000648**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	24-Dec-2020 11:23
Calcium	**18.4**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	24-Dec-2020 11:23
Chromium	**0.0139**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:23
Cobalt	**0.00232**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	24-Dec-2020 11:23
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	24-Dec-2020 11:23
Iron	**0.0986**	J	**0.0120**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:23
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:23
Magnesium	**19.7**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:23
Manganese	**0.0701**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:23
Nickel	**0.0437**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:23
Potassium	**2.23**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:23
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	24-Dec-2020 11:23
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 11:23
Sodium	**104**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:23
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:23
Vanadium	**0.000664**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:23
Zinc	**0.0188**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:23
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 18-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	18-Dec-2020 18:59
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW08DW_120820
Collection Date: 08-Dec-2020 08:15

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.070**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 15:14
Surr: 2-Fluorobiphenyl	*91.9*		**0**	*40-140*		*%REC*	*1*	*11-Dec-2020 15:14*
Surr: 4-Terphenyl-d14	*99.0*		**0**	*40-140*		*%REC*	*1*	*11-Dec-2020 15:14*
Surr: Nitrobenzene-d5	*86.4*		**0**	*40-140*		*%REC*	*1*	*11-Dec-2020 15:14*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)	**Method:NA**							Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CTPMW08SW_120820
Collection Date: 08-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:05
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,1-Dichloroethane	**3.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:05
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:05
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:05
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:05
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:05
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:05
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
1,3-Dichlorobenzene	**0.57**	J	**0.40**	**1.0**	**1.0**	**ug/L**	1	18-Dec-2020 19:05
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:05
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:05
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 19:05
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:05
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 19:05
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:05
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:05
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 19:05
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 19:05
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:05
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 19:05
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CTPMW08SW_120820
Collection Date: 08-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
cis-1,2-Dichloroethene	**9.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:05
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:05
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:05
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 19:05
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:05
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 19:05
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 19:05
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:05
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Trichloroethene	**35**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:05
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:05
Vinyl chloride	**2.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:05
Surr: 1,2-Dichloroethane-d4	*90.3*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 19:05*
Surr: 4-Bromofluorobenzene	*94.6*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 19:05*
Surr: Dibromofluoromethane	*91.2*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 19:05*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 19:05*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.073**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 15:32
Surr: 2-Fluorobiphenyl	*75.4*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 15:32*
Surr: 4-Terphenyl-d14	*114*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 15:32*
Surr: Nitrobenzene-d5	*77.7*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 15:32*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CTPMW08SW_120820_a
Collection Date: 08-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,1-Dichloroethane	**3.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:27
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:27
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:27
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:27
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:27
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
1,3-Dichlorobenzene	**0.56**	J	**0.40**	**1.0**	**1.0**	**ug/L**	1	18-Dec-2020 19:27
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:27
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 19:27
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 19:27
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:27
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 19:27
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 19:27
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:27
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 19:27
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CTPMW08SW_120820_a
Collection Date: 08-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
cis-1,2-Dichloroethene	**9.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:27
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 19:27
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 19:27
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 19:27
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:27
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:27
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Trichloroethene	**36**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:27
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:27
Vinyl chloride	**2.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:27
Surr: 1,2-Dichloroethane-d4	*88.4*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 19:27*
Surr: 4-Bromofluorobenzene	*93.3*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 19:27*
Surr: Dibromofluoromethane	*91.5*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 19:27*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 19:27*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.10**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 15:50
Surr: 2-Fluorobiphenyl	*93.9*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 15:50*
Surr: 4-Terphenyl-d14	*95.5*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 15:50*
Surr: Nitrobenzene-d5	*70.5*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 15:50*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW23_120820
Collection Date: 08-Dec-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,1,2,2-Tetrachloroethane	2.5	U	2.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,1,2-Trichloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,1-Dichloropropene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
1,2,3-Trichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	18-Dec-2020 15:56
1,2,3-Trichloropropane	5.0	U	2.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
1,2,4-Trichlorobenzene	5.0	U	2.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
1,2,4-Trimethylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,2-Dichlorobenzene	5.0	U	2.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
1,2-Dichloroethane	**66**		**1.0**	**2.5**	**5.0**	**ug/L**	5	18-Dec-2020 15:56
1,2-Dichloropropane	2.5	U	2.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,3,5-Trimethylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
1,3-Dichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	18-Dec-2020 15:56
1,3-Dichloropropane	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
1,4-Dichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	18-Dec-2020 15:56
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
2-Butanone	5.0	U	2.5	5.0	10	ug/L	5	18-Dec-2020 15:56
2-Chlorotoluene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
2-Hexanone	10	U	5.0	10	10	ug/L	5	18-Dec-2020 15:56
4-Chlorotoluene	5.0	U	2.0	5.0	5.0	ug/L	5	18-Dec-2020 15:56
4-Isopropyltoluene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
4-Methyl-2-pentanone	10	U	3.5	10	10	ug/L	5	18-Dec-2020 15:56
Acetone	5.0	U	2.0	5.0	10	ug/L	5	18-Dec-2020 15:56
Benzene	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Bromobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	18-Dec-2020 15:56
Bromochloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Bromodichloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Bromoform	2.5	U	2.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Bromomethane	2.5	U	2.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Carbon disulfide	5.0	U	3.0	5.0	10	ug/L	5	18-Dec-2020 15:56
Carbon tetrachloride	**4.8**	J	**2.5**	**2.5**	**5.0**	**ug/L**	5	18-Dec-2020 15:56
Chlorobenzene	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Chloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Chloroform	**9.3**		**1.0**	**2.5**	**5.0**	**ug/L**	5	18-Dec-2020 15:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW23_120820
Collection Date: 08-Dec-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
cis-1,2-Dichloroethene	**20**		**1.0**	**2.5**	**5.0**	**ug/L**	5	18-Dec-2020 15:56
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Dibromochloromethane	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Dibromomethane	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Dichlorodifluoromethane	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
Ethylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	ug/L	5	18-Dec-2020 15:56
Isopropylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
m,p-Xylene	5.0	U	2.5	5.0	10	ug/L	5	18-Dec-2020 15:56
Methylene chloride	5.0	U	2.0	5.0	10	ug/L	5	18-Dec-2020 15:56
n-Butylbenzene	5.0	U	2.0	5.0	5.0	ug/L	5	18-Dec-2020 15:56
n-Propylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
Naphthalene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
o-Xylene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
sec-Butylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
Styrene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
tert-Butylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	18-Dec-2020 15:56
Tetrachloroethene	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Toluene	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
trans-1,2-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Trichloroethene	**2,800**		**10**	**25**	**50**	**ug/L**	50	18-Dec-2020 17:20
Trichlorofluoromethane	2.5	U	1.5	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Vinyl chloride	2.5	U	1.0	2.5	5.0	ug/L	5	18-Dec-2020 15:56
Surr: 1,2-Dichloroethane-d4	*86.5*			**0**	*81-118*	*%REC*	*5*	*18-Dec-2020 15:56*
Surr: 1,2-Dichloroethane-d4	*88.2*			**0**	*81-118*	*%REC*	*50*	*18-Dec-2020 17:20*
Surr: 4-Bromofluorobenzene	*95.6*			**0**	*85-114*	*%REC*	*5*	*18-Dec-2020 15:56*
Surr: 4-Bromofluorobenzene	*93.6*			**0**	*85-114*	*%REC*	*50*	*18-Dec-2020 17:20*
Surr: Dibromofluoromethane	*86.9*			**0**	*80-119*	*%REC*	*5*	*18-Dec-2020 15:56*
Surr: Dibromofluoromethane	*89.0*			**0**	*80-119*	*%REC*	*50*	*18-Dec-2020 17:20*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*5*	*18-Dec-2020 15:56*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*50*	*18-Dec-2020 17:20*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW16_120820
Collection Date: 08-Dec-2020 10:35

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,1-Dichloroethane	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:14
1,1-Dichloroethene	**5.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:14
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:14
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 15:14
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 15:14
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 15:14
1,2-Dichloroethane	**38**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:14
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:14
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:14
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 15:14
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 15:14
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:14
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 15:14
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 15:14
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:14
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 15:14
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW16_120820
Collection Date: 08-Dec-2020 10:35

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
cis-1,2-Dichloroethene	**21**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:14
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 15:14
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 15:14
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 15:14
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:14
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:14
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Trichloroethene	**440**		**1.0**	**2.5**	**5.0**	**ug/L**	5	18-Dec-2020 18:02
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:14
Surr: 1,2-Dichloroethane-d4	*86.7*			**0**	*81-118*	*%REC*	*5*	*18-Dec-2020 18:02*
Surr: 1,2-Dichloroethane-d4	*88.1*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 15:14*
Surr: 4-Bromofluorobenzene	*95.2*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 15:14*
Surr: 4-Bromofluorobenzene	*90.9*			**0**	*85-114*	*%REC*	*5*	*18-Dec-2020 18:02*
Surr: Dibromofluoromethane	*89.0*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 15:14*
Surr: Dibromofluoromethane	*87.4*			**0**	*80-119*	*%REC*	*5*	*18-Dec-2020 18:02*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 15:14*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*5*	*18-Dec-2020 18:02*
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**1.2**		**0.10**	**0.10**	**0.10**	**ug/L**	10	14-Dec-2020 13:53
Surr: 2-Fluorobiphenyl	*101*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 13:53*
Surr: 4-Terphenyl-d14	*108*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 13:53*
Surr: Nitrobenzene-d5	*49.3*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 13:53*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW16_120820
Collection Date: 08-Dec-2020 10:35

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW23_120820
Collection Date: 08-Dec-2020 11:25

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 15:35
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
1,1-Dichloroethane	**0.42**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:35
1,1-Dichloroethene	**3.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:35
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:35
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 15:35
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 15:35
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 15:35
1,2-Dichloroethane	**110**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:35
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 15:35
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:35
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:35
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 15:35
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 15:35
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:35
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 15:35
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 15:35
Benzene	**0.74**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:35
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:35
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 15:35
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW23_120820
Collection Date: 08-Dec-2020 11:25

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
cis-1,2-Dichloroethene	**190**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:35
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 15:35
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 15:35
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 15:35
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 15:35
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
trans-1,2-Dichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 15:35
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Trichloroethene	**1,700**		**10**	**25**	**50**	**ug/L**	50	18-Dec-2020 18:23
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 15:35
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 15:35
Surr: 1,2-Dichloroethane-d4	*87.9*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 15:35*
Surr: 1,2-Dichloroethane-d4	*88.9*			**0**	*81-118*	*%REC*	*50*	*18-Dec-2020 18:23*
Surr: 4-Bromofluorobenzene	*94.2*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 15:35*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*50*	*18-Dec-2020 18:23*
Surr: Dibromofluoromethane	*88.7*			**0**	*80-119*	*%REC*	*50*	*18-Dec-2020 18:23*
Surr: Dibromofluoromethane	*89.2*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 15:35*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*50*	*18-Dec-2020 18:23*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 15:35*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.94**		**0.10**	**0.10**	**0.10**	**ug/L**	10	14-Dec-2020 14:11
Surr: 2-Fluorobiphenyl	*129*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 14:11*
Surr: 4-Terphenyl-d14	*103*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 14:11*
Surr: Nitrobenzene-d5	*82.9*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 14:11*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW23_120820
Collection Date: 08-Dec-2020 11:25

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW24_120820
Collection Date: 08-Dec-2020 12:10

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:53
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:53
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:53
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:53
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:53
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:53
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:53
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:53
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 14:53
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 14:53
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:53
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 14:53
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 14:53
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:53
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 14:53
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:53
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW24_120820
Collection Date: 08-Dec-2020 12:10

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 14:53
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:53
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 14:53
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 14:53
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:53
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:53
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:53
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:53
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:53
Surr: 1,2-Dichloroethane-d4	*88.7*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 14:53*
Surr: 4-Bromofluorobenzene	*94.7*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 14:53*
Surr: Dibromofluoromethane	*88.7*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 14:53*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 14:53*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW24_120820
Collection Date: 08-Dec-2020 12:10

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Aluminum	**0.151**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	24-Dec-2020 16:10
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 16:10
Arsenic	**0.000759**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 16:10
Barium	**0.0505**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 16:10
Beryllium	**0.00114**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	24-Dec-2020 16:10
Cadmium	**0.000252**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	24-Dec-2020 16:10
Calcium	**46.1**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	24-Dec-2020 16:10
Chromium	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 16:10
Cobalt	**0.0144**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	24-Dec-2020 16:10
Copper	**0.00210**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 16:10
Iron	**0.223**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 16:10
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 16:10
Magnesium	**51.2**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 16:10
Manganese	**5.13**		**0.0350**	**0.125**	**0.250**	**mg/L**	50	24-Dec-2020 11:50
Nickel	**0.196**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 16:10
Potassium	**0.535**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 16:10
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	24-Dec-2020 16:10
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 16:10
Sodium	**755**		**0.700**	**2.50**	**10.0**	**mg/L**	50	24-Dec-2020 11:50
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 16:10
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 16:10
Zinc	**0.0762**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 16:10
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 18-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	18-Dec-2020 19:01
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CTPMW15_120820
Collection Date: 08-Dec-2020 13:00

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:48
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:48
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:48
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:48
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 19:48
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:48
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:48
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:48
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 19:48
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:48
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 19:48
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:48
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:48
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 19:48
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 19:48
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:48
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 19:48
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CTPMW15_120820
Collection Date: 08-Dec-2020 13:00

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 19:48
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:48
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 19:48
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 19:48
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 19:48
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:48
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:48
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 19:48
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Trichloroethene	**2.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 19:48
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 19:48
Surr: 1,2-Dichloroethane-d4	*89.0*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 19:48*
Surr: 4-Bromofluorobenzene	*92.5*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 19:48*
Surr: Dibromofluoromethane	*89.5*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 19:48*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 19:48*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	11-Dec-2020 16:44
Surr: 2-Fluorobiphenyl	*102*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 16:44*
Surr: 4-Terphenyl-d14	*103*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 16:44*
Surr: Nitrobenzene-d5	*90.8*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 16:44*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 08-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-10
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:32
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:32
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:32
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 14:32
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:32
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:32
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 14:32
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 14:32
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:32
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 14:32
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 14:32
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:32
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 14:32
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 08-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120486
Lab ID:HS20120486-10
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 14:32
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 14:32
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 14:32
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 14:32
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 14:32
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 14:32
Surr: 1,2-Dichloroethane-d4	*88.6*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 14:32*
Surr: 4-Bromofluorobenzene	*91.4*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 14:32*
Surr: Dibromofluoromethane	*89.2*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 14:32*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 14:32*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

Batch ID: 160571 **Start Date:** 10 Dec 2020 10:30 **End Date:** 10 Dec 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120486-01	1	1000 (mL)	1 (mL)	0.001
HS20120486-02	1	1000 (mL)	1 (mL)	0.001
HS20120486-03	1	1000 (mL)	1 (mL)	0.001
HS20120486-04	1	1000 (mL)	1 (mL)	0.001
HS20120486-06	1	1000 (mL)	1 (mL)	0.001
HS20120486-07	1	1000 (mL)	1 (mL)	0.001
HS20120486-09	1	1000 (mL)	1 (mL)	0.001

Batch ID: 160855 **Start Date:** 18 Dec 2020 10:00 **End Date:** 18 Dec 2020 12:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120486-01		10 (mL)	10 (mL)	1
HS20120486-08		10 (mL)	10 (mL)	1

Batch ID: 160930 **Start Date:** 21 Dec 2020 13:00 **End Date:** 21 Dec 2020 17:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120486-01		10 (mL)	10 (mL)	1
HS20120486-08		10 (mL)	10 (mL)	1

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160571 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Groundwater	
HS20120486-01	MW5_120820	08 Dec 2020 07:25		10 Dec 2020 13:05	11 Dec 2020 14:56	1
HS20120486-02	18CPTMW08DW_120820	08 Dec 2020 08:15		10 Dec 2020 13:05	11 Dec 2020 15:14	1
HS20120486-03	18CTPMW08SW_120820	08 Dec 2020 09:00		10 Dec 2020 13:05	11 Dec 2020 15:32	1
HS20120486-04	18CTPMW08SW_120820_a	08 Dec 2020 09:00		10 Dec 2020 13:05	11 Dec 2020 15:50	1
HS20120486-06	MW16_120820	08 Dec 2020 10:35		10 Dec 2020 13:05	14 Dec 2020 13:53	10
HS20120486-07	18CPTMW23_120820	08 Dec 2020 11:25		10 Dec 2020 13:05	14 Dec 2020 14:11	10
HS20120486-09	18CTPMW15_120820	08 Dec 2020 13:00		10 Dec 2020 13:05	11 Dec 2020 16:44	1
Batch ID: 160855 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Groundwater	
HS20120486-01	MW5_120820	08 Dec 2020 07:25		18 Dec 2020 10:00	18 Dec 2020 18:59	1
HS20120486-08	18WW24_120820	08 Dec 2020 12:10		18 Dec 2020 10:00	18 Dec 2020 19:01	1
Batch ID: 160930 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20120486-01	MW5_120820	08 Dec 2020 07:25		21 Dec 2020 17:00	24 Dec 2020 11:23	1
HS20120486-08	18WW24_120820	08 Dec 2020 12:10		21 Dec 2020 17:00	24 Dec 2020 16:10	1
HS20120486-08	18WW24_120820	08 Dec 2020 12:10		21 Dec 2020 17:00	24 Dec 2020 11:50	50
Batch ID: R375002 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120486-10	Trip Blank	08 Dec 2020 00:00			18 Dec 2020 14:32	1
Batch ID: R375002 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120486-01	MW5_120820	08 Dec 2020 07:25			18 Dec 2020 18:44	1
HS20120486-03	18CTPMW08SW_120820	08 Dec 2020 09:00			18 Dec 2020 19:05	1
HS20120486-04	18CTPMW08SW_120820_a	08 Dec 2020 09:00			18 Dec 2020 19:27	1
HS20120486-05	MW23_120820	08 Dec 2020 09:50			18 Dec 2020 17:20	50
HS20120486-05	MW23_120820	08 Dec 2020 09:50			18 Dec 2020 15:56	5
HS20120486-06	MW16_120820	08 Dec 2020 10:35			18 Dec 2020 18:02	5
HS20120486-06	MW16_120820	08 Dec 2020 10:35			18 Dec 2020 15:14	1
HS20120486-07	18CPTMW23_120820	08 Dec 2020 11:25			18 Dec 2020 18:23	50
HS20120486-07	18CPTMW23_120820	08 Dec 2020 11:25			18 Dec 2020 15:35	1
HS20120486-08	18WW24_120820	08 Dec 2020 12:10			18 Dec 2020 14:53	1
HS20120486-09	18CTPMW15_120820	08 Dec 2020 13:00			18 Dec 2020 19:48	1

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375271 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS20120486-01	MW5_120820	08 Dec 2020 07:25			23 Dec 2020 16:16	1
HS20120486-02	18CPTMW08DW_120820	08 Dec 2020 08:15			23 Dec 2020 16:16	1
HS20120486-03	18CTPMW08SW_120820	08 Dec 2020 09:00			23 Dec 2020 16:16	1
HS20120486-04	18CTPMW08SW_120820_a	08 Dec 2020 09:00			23 Dec 2020 16:16	1
HS20120486-05	MW23_120820	08 Dec 2020 09:50			23 Dec 2020 16:16	1
HS20120486-06	MW16_120820	08 Dec 2020 10:35			23 Dec 2020 16:16	1
HS20120486-07	18CPTMW23_120820	08 Dec 2020 11:25			23 Dec 2020 16:16	1
HS20120486-08	18WW24_120820	08 Dec 2020 12:10			23 Dec 2020 16:16	1
HS20120486-09	18CTPMW15_120820	08 Dec 2020 13:00			23 Dec 2020 16:16	1

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: 160855 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-160855** Units: **mg/L** Analysis Date: **18-Dec-2020 18:54**
Client ID: Run ID: **HG03_374971** SeqNo: **5888945** PrepDate: **18-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-160855** Units: **mg/L** Analysis Date: **18-Dec-2020 18:57**
Client ID: Run ID: **HG03_374971** SeqNo: **5888946** PrepDate: **18-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.000200	0.005	0	99.6	82 - 119				

MS Sample ID: **HS20120486-08MS** Units: **mg/L** Analysis Date: **18-Dec-2020 19:02**
Client ID: **18WW24_120820** Run ID: **HG03_374971** SeqNo: **5888949** PrepDate: **18-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00501	0.000200	0.005	0.000002000	100	82 - 119				

MSD Sample ID: **HS20120486-08MSD** Units: **mg/L** Analysis Date: **18-Dec-2020 19:06**
Client ID: **18WW24_120820** Run ID: **HG03_374971** SeqNo: **5888950** PrepDate: **18-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00492	0.000200	0.005	0.000002000	98.4	82 - 119	0.005010	1.81	20	

The following samples were analyzed in this batch: HS20120486-01 HS20120486-08

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160930** Units: **mg/L** Analysis Date: **24-Dec-2020 10:49**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897738** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.00500	0.0100								U
Antimony	0.00100	0.00500								U
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Copper	0.00250	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.0500	0.200								U
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.0500	0.200								U
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-160930** Units: **mg/L** Analysis Date: **24-Dec-2020 10:51**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897739** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1007	0.0100	0.1	0	101	84 - 117				
Antimony	0.04756	0.00500	0.05	0	95.1	85 - 117				
Arsenic	0.05162	0.00500	0.05	0	103	84 - 116				
Barium	0.047	0.00500	0.05	0	94.0	86 - 114				
Beryllium	0.0503	0.00200	0.05	0	101	83 - 121				
Cadmium	0.04986	0.00200	0.05	0	99.7	87 - 115				
Calcium	4.769	0.500	5	0	95.4	87 - 118				
Chromium	0.04503	0.00500	0.05	0	90.1	85 - 116				
Cobalt	0.04575	0.00500	0.05	0	91.5	86 - 115				
Copper	0.04806	0.00500	0.05	0	96.1	85 - 118				
Iron	4.679	0.200	5	0	93.6	87 - 118				
Lead	0.04482	0.00500	0.05	0	89.6	88 - 115				
Magnesium	4.696	0.200	5	0	93.9	83 - 118				
Manganese	0.0471	0.00500	0.05	0	94.2	87 - 115				
Nickel	0.04733	0.00500	0.05	0	94.7	85 - 117				
Potassium	4.621	0.200	5	0	92.4	87 - 115				
Selenium	0.05751	0.00500	0.05	0	115	80 - 120				
Silver	0.04736	0.00500	0.05	0	94.7	85 - 116				
Sodium	4.535	0.200	5	0	90.7	85 - 117				
Thallium	0.04191	0.00200	0.05	0	83.8	82 - 116				
Vanadium	0.04439	0.00500	0.05	0	88.8	86 - 115				
Zinc	0.05143	0.00500	0.05	0	103	83 - 119				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20120486-08MS** Units: **mg/L** Analysis Date: **24-Dec-2020 10:59**
Client ID: **18WW24_120820** Run ID: **ICPMS05_375348** SeqNo: **5897743** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4012	0.0100	0.2	0.1505	125	84 - 117				S
Antimony	0.04781	0.00500	0.05	0.000135	95.4	85 - 117				
Arsenic	0.05393	0.00500	0.05	0.000759	106	84 - 116				
Barium	0.103	0.00500	0.05	0.05047	105	86 - 114				
Beryllium	0.05695	0.00200	0.05	0.00114	112	83 - 121				
Cadmium	0.04739	0.00200	0.05	0.000252	94.3	87 - 115				
Calcium	62.06	0.500	5	46.14	318	87 - 118				SO
Chromium	0.04762	0.00500	0.05	0.000225	94.8	85 - 116				
Cobalt	0.06064	0.00500	0.05	0.01437	92.5	86 - 115				
Copper	0.04852	0.00500	0.05	0.002096	92.9	85 - 118				
Iron	5.152	0.200	5	0.2228	98.6	87 - 118				
Lead	0.04857	0.00500	0.05	0.000139	96.9	88 - 115				
Magnesium	50.79	0.200	5	51.19	-7.98	83 - 118				SO
Manganese	5.449	0.00500	0.05	5.178	541	87 - 115				SEO
Nickel	0.2144	0.00500	0.05	0.196	36.6	85 - 117				S
Potassium	5.772	0.200	5	0.5352	105	87 - 115				
Selenium	0.05414	0.00500	0.05	-0.000434	109	80 - 120				
Silver	0.04515	0.00500	0.05	0.000029	90.2	85 - 116				
Sodium	803.3	0.200	5	857.4	-1080	85 - 117				SEO
Thallium	0.04546	0.00200	0.05	0.000023	90.9	82 - 116				
Vanadium	0.05019	0.00500	0.05	0.000395	99.6	86 - 115				
Zinc	0.11	0.00500	0.05	0.07624	67.6	83 - 119				S

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20120486-08MSD** Units: **mg/L** Analysis Date: **24-Dec-2020 11:15**
Client ID: **18WW24_120820** Run ID: **ICPMS05_375348** SeqNo: **5897749** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4017	0.0100	0.2	0.1505	126	84 - 117	0.4012	0.108	20	S
Antimony	0.04871	0.00500	0.05	0.000135	97.2	85 - 117	0.04781	1.86	20	
Arsenic	0.05396	0.00500	0.05	0.000759	106	84 - 116	0.05393	0.0445	20	
Barium	0.1028	0.00500	0.05	0.05047	105	86 - 114	0.103	0.203	20	
Beryllium	0.05802	0.00200	0.05	0.00114	114	83 - 121	0.05695	1.86	20	
Cadmium	0.04716	0.00200	0.05	0.000252	93.8	87 - 115	0.04739	0.491	20	
Calcium	61.93	0.500	5	46.14	316	87 - 118	62.06	0.208	20	SO
Chromium	0.04758	0.00500	0.05	0.000225	94.7	85 - 116	0.04762	0.0672	20	
Cobalt	0.06048	0.00500	0.05	0.01437	92.2	86 - 115	0.06064	0.267	20	
Copper	0.04877	0.00500	0.05	0.002096	93.4	85 - 118	0.04852	0.516	20	
Iron	5.159	0.200	5	0.2228	98.7	87 - 118	5.152	0.131	20	
Lead	0.04779	0.00500	0.05	0.000139	95.3	88 - 115	0.04857	1.63	20	
Magnesium	51.14	0.200	5	51.19	-0.990	83 - 118	50.79	0.686	20	SO
Manganese	5.435	0.00500	0.05	5.178	513	87 - 115	5.449	0.259	20	SEO
Nickel	0.2132	0.00500	0.05	0.196	34.3	85 - 117	0.2144	0.54	20	S
Potassium	5.777	0.200	5	0.5352	105	87 - 115	5.772	0.088	20	
Selenium	0.0537	0.00500	0.05	-0.000434	108	80 - 120	0.05414	0.807	20	
Silver	0.04497	0.00500	0.05	0.000029	89.9	85 - 116	0.04515	0.408	20	
Sodium	814.1	0.200	5	857.4	-867	85 - 117	803.3	1.34	20	SEO
Thallium	0.04442	0.00200	0.05	0.000023	88.8	82 - 116	0.04546	2.31	20	
Vanadium	0.05032	0.00500	0.05	0.000395	99.8	86 - 115	0.05019	0.243	20	
Zinc	0.108	0.00500	0.05	0.07624	63.5	83 - 119	0.11	1.88	20	S

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20120486-08PDS** Units: **mg/L** Analysis Date: **24-Dec-2020 11:03**
Client ID: **18WW24_120820** Run ID: **ICPMS05_375348** SeqNo: **5897745** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.372	0.0100	0.2	0.1505	111	80 - 120				
Antimony	0.09368	0.00500	0.1	0.000135	93.5	80 - 120				
Arsenic	0.1166	0.00500	0.1	0.000759	116	80 - 120				
Barium	0.1627	0.00500	0.1	0.05047	112	80 - 120				
Beryllium	0.1165	0.00200	0.1	0.00114	115	80 - 120				
Cadmium	0.1011	0.00200	0.1	0.000252	101	80 - 120				
Calcium	69.94	0.500	10	46.14	238	80 - 120				SO
Chromium	0.1042	0.00500	0.1	0.000225	104	80 - 120				
Cobalt	0.116	0.00500	0.1	0.01437	102	80 - 120				
Copper	0.1042	0.00500	0.1	0.002096	102	80 - 120				
Iron	10.81	0.200	10	0.2228	106	80 - 120				
Lead	0.109	0.00500	0.1	0.000139	109	80 - 120				
Magnesium	59.22	0.200	10	51.19	80.3	80 - 120				O
Potassium	11.59	0.200	10	0.5352	111	80 - 120				
Selenium	0.1159	0.00500	0.1	-0.000434	116	80 - 120				
Silver	0.09472	0.00500	0.1	0.000029	94.7	80 - 120				
Thallium	0.1093	0.00200	0.1	0.000023	109	80 - 120				
Vanadium	0.1096	0.00500	0.1	0.000395	109	80 - 120				
Zinc	0.1684	0.00500	0.1	0.07624	92.2	80 - 120				

PDS Sample ID: **HS20120486-08PDS** Units: **mg/L** Analysis Date: **24-Dec-2020 11:54**
Client ID: **18WW24_120820** Run ID: **ICPMS05_375348** SeqNo: **5897764** PrepDate: **21-Dec-2020** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	9.761	0.250	5	5.126	92.7	80 - 120				
Sodium	1225	10.0	500	755.4	93.9	80 - 120				

PDS Sample ID: **HS20120486-08PDS** Units: **mg/L** Analysis Date: **28-Dec-2020 17:09**
Client ID: **18WW24_120820** Run ID: **ICPMS05_375466** SeqNo: **5900648** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nickel	0.2774	0.00500	0.1	0.1632	114	80 - 120				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20120486-08SD** Units: **mg/L** Analysis Date: **24-Dec-2020 16:12**
Client ID: **18WW24_120820** Run ID: **ICPMS05_375348** SeqNo: **5898069** PrepDate: **21-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.1522	0.0500					0.1505	1.14	10	
Antimony	0.00500	0.0250					0.000135	0	10	U
Arsenic	0.00500	0.0250					0.000759	0	10	U
Barium	0.05135	0.0250					0.05047	1.74	10	
Beryllium	0.00250	0.0100					0.00114	0	10	U
Cadmium	0.00250	0.0100					0.000252	0	10	U
Calcium	47.85	2.50					46.14	3.71	10	
Chromium	0.00500	0.0250					0.000225	0	10	U
Cobalt	0.01416	0.0250					0.01437	0	10	J
Copper	0.0125	0.0250					0.002096	0	10	U
Iron	0.2207	1.00					0.2228	0	10	J
Lead	0.00500	0.0250					0.000139	0	10	U
Magnesium	49.67	1.00					51.19	2.96	10	
Manganese	5.251	0.0250					5.178	1.4	10	
Nickel	0.1869	0.0250					0.196	4.64	10	
Potassium	0.5551	1.00					0.5352	0	10	J
Selenium	0.0125	0.0250					-0.000434	0	10	U
Silver	0.00250	0.0250					0.000029	0	10	U
Sodium	832	1.00					857.4	2.97	10	
Thallium	0.00250	0.0100					0.000023	0	10	U
Vanadium	0.00500	0.0250					0.000395	0	10	U
Zinc	0.07837	0.0250					0.07624	2.8	10	

SD Sample ID: **HS20120486-08SD** Units: **mg/L** Analysis Date: **24-Dec-2020 11:52**
Client ID: **18WW24_120820** Run ID: **ICPMS05_375348** SeqNo: **5897763** PrepDate: **21-Dec-2020** DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Manganese	5.221	1.25					5.126	1.85	10	
Sodium	787.8	50.0					755.4	4.29	10	

The following samples were analyzed in this batch: HS20120486-01 HS20120486-08

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: 160571 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:13**
Client ID: Run ID: **SV-6_374543** SeqNo: **5884129** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.0734*	*0*	*0.08*	*0*	*91.7*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07746*	*0*	*0.08*	*0*	*96.8*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07901*	*0*	*0.08*	*0*	*98.8*	*40 - 140*				

LCS Sample ID: **LCS-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:31**
Client ID: Run ID: **SV-6_374543** SeqNo: **5902299** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.05443	0.010	0.08	0	68.0	40 - 140				
Surr: 2-Fluorobiphenyl	*0.07902*	*0*	*0.08*	*0*	*98.8*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.0831*	*0*	*0.08*	*0*	*104*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07701*	*0*	*0.08*	*0*	*96.3*	*40 - 140*				

LCSD Sample ID: **LCSD-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:49**
Client ID: Run ID: **SV-6_374543** SeqNo: **5902300** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.05387	0.010	0.08	0	67.3	40 - 140	0.05443	1.03	20	
Surr: 2-Fluorobiphenyl	*0.08157*	*0*	*0.08*	*0*	*102*	*40 - 140*	*0.07902*	*3.17*	*20*	
Surr: 4-Terphenyl-d14	*0.08221*	*0*	*0.08*	*0*	*103*	*40 - 140*	*0.0831*	*1.08*	*20*	
Surr: Nitrobenzene-d5	*0.08435*	*0*	*0.08*	*0*	*105*	*40 - 140*	*0.07701*	*9.1*	*20*	

The following samples were analyzed in this batch: HS20120486-01 HS20120486-02 HS20120486-03 HS20120486-04 HS20120486-06 HS20120486-07 HS20120486-09

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:46**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889270** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:46**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889270** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*44.65*	*1.0*	*50*	*0*	*89.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.53*	*1.0*	*50*	*0*	*93.1*	*85 - 114*				
Surr: Dibromofluoromethane	*43.66*	*1.0*	*50*	*0*	*87.3*	*80 - 119*				
Surr: Toluene-d8	*51.01*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:04**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889269** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.81	1.0	20	0	99.0	78 - 124				
1,1,1-Trichloroethane	20.86	1.0	20	0	104	74 - 131				
1,1,2,2-Tetrachloroethane	20.55	1.0	20	0	103	71 - 121				
1,1,2-Trichloroethane	20.74	1.0	20	0	104	80 - 119				
1,1-Dichloroethane	21.36	1.0	20	0	107	77 - 125				
1,1-Dichloroethene	19.61	1.0	20	0	98.1	71 - 131				
1,1-Dichloropropene	20.92	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	26.4	1.0	20	0	132	69 - 129				S
1,2,3-Trichloropropane	20.56	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	22.93	1.0	20	0	115	69 - 130				
1,2,4-Trimethylbenzene	19.93	1.0	20	0	99.6	76 - 124				
1,2-Dibromo-3-chloropropane	22.97	1.0	20	0	115	62 - 128				
1,2-Dibromoethane	21.46	1.0	20	0	107	77 - 121				
1,2-Dichlorobenzene	19.45	1.0	20	0	97.3	80 - 119				
1,2-Dichloroethane	21.92	1.0	20	0	110	73 - 128				
1,2-Dichloropropane	21.3	1.0	20	0	106	78 - 122				
1,3,5-Trimethylbenzene	18.94	1.0	20	0	94.7	75 - 124				
1,3-Dichlorobenzene	19.32	1.0	20	0	96.6	80 - 119				
1,3-Dichloropropane	21.36	1.0	20	0	107	80 - 119				
1,4-Dichlorobenzene	19.81	1.0	20	0	99.1	79 - 118				
2,2-Dichloropropane	21.66	1.0	20	0	108	60 - 139				
2-Butanone	47.29	2.0	40	0	118	56 - 143				
2-Chlorotoluene	20.21	1.0	20	0	101	79 - 122				
2-Hexanone	40.39	2.0	40	0	101	57 - 139				
4-Chlorotoluene	19.55	1.0	20	0	97.8	78 - 122				
4-Isopropyltoluene	18.73	1.0	20	0	93.7	77 - 127				
4-Methyl-2-pentanone	41.18	2.0	40	0	103	67 - 130				
Acetone	44.38	2.0	40	0	111	39 - 160				
Benzene	21	1.0	20	0	105	79 - 120				
Bromobenzene	20	1.0	20	0	100.0	80 - 120				
Bromochloromethane	20.27	1.0	20	0	101	78 - 123				
Bromodichloromethane	22.16	1.0	20	0	111	79 - 125				
Bromoform	22.03	1.0	20	0	110	66 - 130				
Bromomethane	21.82	1.0	20	0	109	53 - 141				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:04**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889269** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	46.65	2.0	40	0	117	64 - 133				
Carbon tetrachloride	21.32	1.0	20	0	107	72 - 136				
Chlorobenzene	19.89	1.0	20	0	99.5	82 - 118				
Chloroethane	21.78	1.0	20	0	109	60 - 138				
Chloroform	21.05	1.0	20	0	105	79 - 124				
Chloromethane	16.18	1.0	20	0	80.9	50 - 139				
cis-1,2-Dichloroethene	21.03	1.0	20	0	105	78 - 123				
cis-1,3-Dichloropropene	21.64	1.0	20	0	108	75 - 124				
Dibromochloromethane	20.74	1.0	20	0	104	74 - 126				
Dibromomethane	21.79	1.0	20	0	109	79 - 123				
Dichlorodifluoromethane	20.23	1.0	20	0	101	32 - 152				
Ethylbenzene	19.56	1.0	20	0	97.8	79 - 121				
Hexachlorobutadiene	23.8	1.0	20	0	119	66 - 134				
Isopropylbenzene	18.76	1.0	20	0	93.8	72 - 131				
m,p-Xylene	39.11	2.0	40	0	97.8	80 - 121				
Methylene chloride	20.85	2.0	20	0	104	74 - 124				
Naphthalene	23.83	1.0	20	0	119	61 - 128				
n-Butylbenzene	20.43	1.0	20	0	102	75 - 128				
n-Propylbenzene	19.63	1.0	20	0	98.2	76 - 126				
o-Xylene	19.15	1.0	20	0	95.7	78 - 122				
sec-Butylbenzene	18.94	1.0	20	0	94.7	77 - 126				
Styrene	20.16	1.0	20	0	101	78 - 123				
tert-Butylbenzene	18.48	1.0	20	0	92.4	78 - 124				
Tetrachloroethene	19.34	1.0	20	0	96.7	74 - 129				
Toluene	20.4	1.0	20	0	102	80 - 121				
trans-1,2-Dichloroethene	21.25	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	21.36	1.0	20	0	107	73 - 127				
Trichloroethene	20.17	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	19.51	1.0	20	0	97.6	65 - 141				
Vinyl chloride	20.21	1.0	20	0	101	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.78*	*1.0*	*50*	*0*	*104*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.21*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*50.02*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*48.63*	*1.0*	*50*	*0*	*97.3*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20120486-08MS** Units: **ug/L** Analysis Date: **18-Dec-2020 16:17**
Client ID: **18WW24_120820** Run ID: **VOA6_375002** SeqNo: **5889280** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.48	1.0	20	0	97.4	78 - 124				
1,1,1-Trichloroethane	18.94	1.0	20	0	94.7	74 - 131				
1,1,2,2-Tetrachloroethane	18.78	1.0	20	0	93.9	71 - 121				
1,1,2-Trichloroethane	19.24	1.0	20	0	96.2	80 - 119				
1,1-Dichloroethane	17.21	1.0	20	0	86.1	77 - 125				
1,1-Dichloroethene	17.05	1.0	20	0	85.3	71 - 131				
1,1-Dichloropropene	19.6	1.0	20	0	98.0	78 - 125				
1,2,3-Trichlorobenzene	18.62	1.0	20	0	93.1	69 - 129				
1,2,3-Trichloropropane	18.48	1.0	20	0	92.4	73 - 122				
1,2,4-Trichlorobenzene	19.42	1.0	20	0	97.1	69 - 130				
1,2,4-Trimethylbenzene	19.94	1.0	20	0	99.7	76 - 124				
1,2-Dibromo-3-chloropropane	17.29	1.0	20	0	86.5	62 - 128				
1,2-Dibromoethane	18.71	1.0	20	0	93.5	77 - 121				
1,2-Dichlorobenzene	18.64	1.0	20	0	93.2	80 - 119				
1,2-Dichloroethane	18.85	1.0	20	0	94.2	73 - 128				
1,2-Dichloropropane	18.98	1.0	20	0	94.9	78 - 122				
1,3,5-Trimethylbenzene	19.53	1.0	20	0	97.6	75 - 124				
1,3-Dichlorobenzene	19.08	1.0	20	0	95.4	80 - 119				
1,3-Dichloropropane	19.4	1.0	20	0	97.0	80 - 119				
1,4-Dichlorobenzene	19.01	1.0	20	0	95.0	79 - 118				
2,2-Dichloropropane	18.63	1.0	20	0	93.1	60 - 139				
2-Butanone	29.98	2.0	40	0	75.0	56 - 143				
2-Chlorotoluene	20.93	1.0	20	0	105	79 - 122				
2-Hexanone	36.4	2.0	40	0	91.0	57 - 139				
4-Chlorotoluene	20.53	1.0	20	0	103	78 - 122				
4-Isopropyltoluene	19.8	1.0	20	0	99.0	77 - 127				
4-Methyl-2-pentanone	34.28	2.0	40	0	85.7	67 - 130				
Acetone	27.15	2.0	40	0	67.9	39 - 160				
Benzene	19.21	1.0	20	0	96.0	79 - 120				
Bromobenzene	19	1.0	20	0	95.0	80 - 120				
Bromochloromethane	17.93	1.0	20	0	89.7	78 - 123				
Bromodichloromethane	18.82	1.0	20	0	94.1	79 - 125				
Bromoform	18.94	1.0	20	0	94.7	66 - 130				
Bromomethane	19.97	1.0	20	0	99.9	53 - 141				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120486-08MS** Units: **ug/L** Analysis Date: **18-Dec-2020 16:17**
Client ID: **18WW24_120820** Run ID: **VOA6_375002** SeqNo: **5889280** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	36.42	2.0	40	0	91.0	64 - 133				
Carbon tetrachloride	21.49	1.0	20	0	107	72 - 136				
Chlorobenzene	19.39	1.0	20	0	97.0	82 - 118				
Chloroethane	17.78	1.0	20	0	88.9	60 - 138				
Chloroform	17.61	1.0	20	0	88.0	79 - 124				
Chloromethane	13.56	1.0	20	0	67.8	50 - 139				
cis-1,2-Dichloroethene	17.98	1.0	20	0	89.9	78 - 123				
cis-1,3-Dichloropropene	18.7	1.0	20	0	93.5	75 - 124				
Dibromochloromethane	19.09	1.0	20	0	95.4	74 - 126				
Dibromomethane	19.05	1.0	20	0	95.3	79 - 123				
Dichlorodifluoromethane	15.64	1.0	20	0	78.2	32 - 152				
Ethylbenzene	20.83	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	23.56	1.0	20	0	118	66 - 134				
Isopropylbenzene	20.69	1.0	20	0	103	72 - 131				
m,p-Xylene	41.04	2.0	40	0	103	80 - 121				
Methylene chloride	17.14	2.0	20	0	85.7	74 - 124				
Naphthalene	17.17	1.0	20	0	85.9	61 - 128				
n-Butylbenzene	20.83	1.0	20	0	104	75 - 128				
n-Propylbenzene	20.62	1.0	20	0	103	76 - 126				
o-Xylene	19.53	1.0	20	0	97.7	78 - 122				
sec-Butylbenzene	19.9	1.0	20	0	99.5	77 - 126				
Styrene	19.52	1.0	20	0	97.6	78 - 123				
tert-Butylbenzene	20.1	1.0	20	0	101	78 - 124				
Tetrachloroethene	21.83	1.0	20	0	109	74 - 129				
Toluene	20.21	1.0	20	0	101	80 - 121				
trans-1,2-Dichloroethene	18.57	1.0	20	0	92.8	75 - 124				
trans-1,3-Dichloropropene	19.74	1.0	20	0	98.7	73 - 127				
Trichloroethene	21.45	1.0	20	0	107	79 - 123				
Trichlorofluoromethane	17.38	1.0	20	0	86.9	65 - 141				
Vinyl chloride	16.83	1.0	20	0	84.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.55*	*1.0*	*50*	*0*	*91.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.25*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*44.43*	*1.0*	*50*	*0*	*88.9*	*80 - 119*				
Surr: Toluene-d8	*51.62*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120486-08MSD** Units: **ug/L** Analysis Date: **18-Dec-2020 16:38**
Client ID: **18WW24_120820** Run ID: **VOA6_375002** SeqNo: **5889281** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.72	1.0	20	0	93.6	78 - 124	19.48	3.97	20	
1,1,1-Trichloroethane	18.47	1.0	20	0	92.4	74 - 131	18.94	2.48	20	
1,1,2,2-Tetrachloroethane	19.84	1.0	20	0	99.2	71 - 121	18.78	5.5	20	
1,1,2-Trichloroethane	19.16	1.0	20	0	95.8	80 - 119	19.24	0.4	20	
1,1-Dichloroethane	16.88	1.0	20	0	84.4	77 - 125	17.21	1.97	20	
1,1-Dichloroethene	17.08	1.0	20	0	85.4	71 - 131	17.05	0.15	20	
1,1-Dichloropropene	19.57	1.0	20	0	97.9	78 - 125	19.6	0.13	20	
1,2,3-Trichlorobenzene	19.83	1.0	20	0	99.2	69 - 129	18.62	6.32	20	
1,2,3-Trichloropropane	19.16	1.0	20	0	95.8	73 - 122	18.48	3.61	20	
1,2,4-Trichlorobenzene	20.3	1.0	20	0	101	69 - 130	19.42	4.44	20	
1,2,4-Trimethylbenzene	19.84	1.0	20	0	99.2	76 - 124	19.94	0.479	20	
1,2-Dibromo-3-chloropropane	20.24	1.0	20	0	101	62 - 128	17.29	15.7	20	
1,2-Dibromoethane	19.02	1.0	20	0	95.1	77 - 121	18.71	1.69	20	
1,2-Dichlorobenzene	19.14	1.0	20	0	95.7	80 - 119	18.64	2.66	20	
1,2-Dichloroethane	18.71	1.0	20	0	93.5	73 - 128	18.85	0.74	20	
1,2-Dichloropropane	18.87	1.0	20	0	94.3	78 - 122	18.98	0.566	20	
1,3,5-Trimethylbenzene	19.2	1.0	20	0	96.0	75 - 124	19.53	1.7	20	
1,3-Dichlorobenzene	18.98	1.0	20	0	94.9	80 - 119	19.08	0.502	20	
1,3-Dichloropropane	19.29	1.0	20	0	96.4	80 - 119	19.4	0.603	20	
1,4-Dichlorobenzene	19.05	1.0	20	0	95.2	79 - 118	19.01	0.23	20	
2,2-Dichloropropane	18.58	1.0	20	0	92.9	60 - 139	18.63	0.263	20	
2-Butanone	34.24	2.0	40	0	85.6	56 - 143	29.98	13.3	20	
2-Chlorotoluene	20.46	1.0	20	0	102	79 - 122	20.93	2.28	20	
2-Hexanone	35.02	2.0	40	0	87.6	57 - 139	36.4	3.84	20	
4-Chlorotoluene	20.2	1.0	20	0	101	78 - 122	20.53	1.63	20	
4-Isopropyltoluene	18.35	1.0	20	0	91.7	77 - 127	19.8	7.59	20	
4-Methyl-2-pentanone	34.66	2.0	40	0	86.7	67 - 130	34.28	1.12	20	
Acetone	28.74	2.0	40	0	71.8	39 - 160	27.15	5.68	20	
Benzene	18.85	1.0	20	0	94.2	79 - 120	19.21	1.9	20	
Bromobenzene	19.33	1.0	20	0	96.7	80 - 120	19	1.73	20	
Bromochloromethane	17.48	1.0	20	0	87.4	78 - 123	17.93	2.55	20	
Bromodichloromethane	19.78	1.0	20	0	98.9	79 - 125	18.82	5	20	
Bromoform	18.76	1.0	20	0	93.8	66 - 130	18.94	0.975	20	
Bromomethane	19.22	1.0	20	0	96.1	53 - 141	19.97	3.85	20	

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120486-08MSD** Units: **ug/L** Analysis Date: **18-Dec-2020 16:38**
Client ID: **18WW24_120820** Run ID: **VOA6_375002** SeqNo: **5889281** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	35.75	2.0	40	0	89.4	64 - 133	36.42	1.85	20	
Carbon tetrachloride	21.23	1.0	20	0	106	72 - 136	21.49	1.2	20	
Chlorobenzene	18.38	1.0	20	0	91.9	82 - 118	19.39	5.39	20	
Chloroethane	17.92	1.0	20	0	89.6	60 - 138	17.78	0.797	20	
Chloroform	17.45	1.0	20	0	87.2	79 - 124	17.61	0.907	20	
Chloromethane	13.21	1.0	20	0	66.1	50 - 139	13.56	2.58	20	
cis-1,2-Dichloroethene	17.85	1.0	20	0	89.3	78 - 123	17.98	0.736	20	
cis-1,3-Dichloropropene	18.68	1.0	20	0	93.4	75 - 124	18.7	0.104	20	
Dibromochloromethane	18.34	1.0	20	0	91.7	74 - 126	19.09	4.03	20	
Dibromomethane	19.94	1.0	20	0	99.7	79 - 123	19.05	4.55	20	
Dichlorodifluoromethane	15.93	1.0	20	0	79.7	32 - 152	15.64	1.82	20	
Ethylbenzene	19.75	1.0	20	0	98.7	79 - 121	20.83	5.35	20	
Hexachlorobutadiene	20.2	1.0	20	0	101	66 - 134	23.56	15.4	20	
Isopropylbenzene	19.26	1.0	20	0	96.3	72 - 131	20.69	7.15	20	
m,p-Xylene	38.55	2.0	40	0	96.4	80 - 121	41.04	6.26	20	
Methylene chloride	17.13	2.0	20	0	85.6	74 - 124	17.14	0.0602	20	
Naphthalene	20.84	1.0	20	0	104	61 - 128	17.17	19.3	20	
n-Butylbenzene	19.66	1.0	20	0	98.3	75 - 128	20.83	5.77	20	
n-Propylbenzene	19.99	1.0	20	0	100.0	76 - 126	20.62	3.1	20	
o-Xylene	18.55	1.0	20	0	92.8	78 - 122	19.53	5.17	20	
sec-Butylbenzene	18.88	1.0	20	0	94.4	77 - 126	19.9	5.26	20	
Styrene	18.88	1.0	20	0	94.4	78 - 123	19.52	3.35	20	
tert-Butylbenzene	19.37	1.0	20	0	96.8	78 - 124	20.1	3.72	20	
Tetrachloroethene	20.02	1.0	20	0	100	74 - 129	21.83	8.68	20	
Toluene	19.29	1.0	20	0	96.5	80 - 121	20.21	4.63	20	
trans-1,2-Dichloroethene	17.8	1.0	20	0	89.0	75 - 124	18.57	4.2	20	
trans-1,3-Dichloropropene	18.73	1.0	20	0	93.7	73 - 127	19.74	5.26	20	
Trichloroethene	20.05	1.0	20	0	100	79 - 123	21.45	6.72	20	
Trichlorofluoromethane	17.52	1.0	20	0	87.6	65 - 141	17.38	0.807	20	
Vinyl chloride	17.17	1.0	20	0	85.8	58 - 137	16.83	1.97	20	
Surr: 1,2-Dichloroethane-d4	*44.36*	*1.0*	*50*	*0*	*88.7*	*81 - 118*	*45.55*	*2.64*	*20*	
Surr: 4-Bromofluorobenzene	*50.22*	*1.0*	*50*	*0*	*100*	*85 - 114*	*51.25*	*2.03*	*20*	
Surr: Dibromofluoromethane	*45.19*	*1.0*	*50*	*0*	*90.4*	*80 - 119*	*44.43*	*1.7*	*20*	
Surr: Toluene-d8	*50.42*	*1.0*	*50*	*0*	*101*	*89 - 112*	*51.62*	*2.35*	*20*	

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120486

QC BATCH REPORT

Batch ID: R375002 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20120486-01	HS20120486-03	HS20120486-04	HS20120486-05
HS20120486-06	HS20120486-07	HS20120486-08	HS20120486-09
HS20120486-10			

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: **HS20120486**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120486

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120486-01	MW5_120820	Login	12/10/2020 6:25:08 AM	JRM	Disposed
HS20120486-01	MW5_120820	Login	12/10/2020 6:25:08 AM	JRM	Sub
HS20120486-01	MW5_120820	Login	12/10/2020 6:25:08 AM	JRM	Disposed
HS20120486-01	MW5_120820	Login	12/10/2020 6:25:08 AM	JRM	Disposed
HS20120486-02	18CPTMW08DW_120820	Login	12/10/2020 6:25:08 AM	JRM	Disposed
HS20120486-02	18CPTMW08DW_120820	Login	12/10/2020 6:25:08 AM	JRM	Sub
HS20120486-02	18CPTMW08DW_120820	Login	12/10/2020 6:25:08 AM	JRM	Disposed
HS20120486-03	18CTPMW08SW_120820	Login	12/10/2020 6:25:08 AM	JRM	Sub
HS20120486-03	18CTPMW08SW_120820	Login	12/10/2020 6:25:08 AM	JRM	Disposed
HS20120486-03	18CTPMW08SW_120820	Login	12/10/2020 6:25:08 AM	JRM	Disposed

ALS Houston, US Date: 29-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120486 **Date/Time Received:** 09-Dec-2020 10:50

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Jared R. Makan	10-Dec-2020 08:41	**Reviewed by:**	/S/ RJ Modashia	10-Dec-2020 07:59
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	3.2°C/3.2°C UC/C-	IR25
Cooler(s)/Kit(s):	44768	
Date/Time sample(s) sent to storage:	12/10/2020 08:45	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

LIMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS	1, 4 - DIOXANE	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
MW5-120820	08 DEC 2020	0725	-	N		WG	6	X	X	X	X				
18CPTMW08DW-120820	08 DEC 2020	0815	-	N		WG	2		X		X				
18CPTMW08SW-120820	08 DEC 2020	0900	-	N		WG	5	X	X		X				
18CPTMW08SW-120820-FD	08 DEC 2020	0900		FD		WG	5	X	X		X				
MW23-120820	08 DEC 2020	0950		N		WG	4	X	X						
MW16-120820	08 DEC 2020	1035	-	N		WG	5	X	X		X				
18CPTMW23-120820	08 DEC 2020	1125	-	N		WG	5	X	X		X				
18WW24-120820	08 DEC 2020	1210	-	N		WG	5	X	X	X					
18WW24-120820-MS	08 DEC 2020	1210	-	MS		WG	5	X	X	X					
18WW24-120820-MSD	08 DEC 2020	1210	-	SD		WG	5	X	X	X					
18CPTMW15-120820	08 DEC 2020	1300	-	N		WG	5	X	X		X				

Sample Analysis Requested (5) | Quality Assurance Samples (6)

COMMENTS:

HS20120486

Bhate Environmental Associates, Inc.
LHAAP 18 24

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	12/18/20	1430	1. SM FM	12.9.20	1050
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.:

_____ Method of Shipment: _____

_____ Fed Ex _____ Airbill Number:

_____ Analytical Lab: ALS 10450 Stanciff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01. If sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

44768 3.2C IR25 CFO

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

LIMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code [2]	Sample Number [3]	Sample Matrix [4]	Sample Analysis Requested [5]: Number of containers	VOC	PERCHLORATE	TOTAL METALS	1, 4 - DIOXANE	Quality Assurance Samples [6]: Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
Trip Blank	08 Dec 2020		-	TB		W	2	X							
			-												
			-												
			-												
			-												
			-												
			-												
			-												
			-												
			-												
			-												

HS20120486
Bhate Environmental Associates, Inc.
LHAAP 18 24

COMMENTS: _____

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	12/8/20	1430	1. SM SM	12-9-20	1050
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.:

Method of Shipment: _____

_____ Fed Ex _____ Airbill Number:

Analytical Lab: ALS 10450 Stanciff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

44768

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

w4768

CUSTODY SEAL

Date: 12/8/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By:
Date: 12/09/20

w4768 DEC 0 9 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

w4768

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 25NOV20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5868
REF: LHAAP - BQ75073 - RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1891 8883 1293

WED - 09 DEC AA
PRIORITY OVERNIGHT

77099
TX-US
IAH

AB SGRA

December 23, 2020 Service Request No:E2001211

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120486

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 10, 2020
For your reference, these analyses have been assigned our service request number **E2001211.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001211
Project:	HS20120486	**Date Received:**	12/10/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Nine samples were received for analysis at ALS Environmental in Houston on 12/10/20. The samples were received in good condition and are consistent with the accompanying chain of custody form.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000677: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS/DLCS RPD exceeded QC limits; the individual recoveries met acceptance criteria.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001211
Project: HS20120486

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001211-001	MW5_120820	12/8/2020	0725
E2001211-002	18CPTMW08DW_120820	12/8/2020	0815
E2001211-003	18CPTMW08SW_120820	12/8/2020	0900
E2001211-004	18CPTMW08SW_120820_a	12/8/2020	0900
E2001211-005	MW23_120820	12/8/2020	0950
E2001211-006	MW16_120820	12/8/2020	1035
E2001211-007	18CPTMW23_120820	12/8/2020	1125
E2001211-008	18WW24_120820	12/8/2020	1210
E2001211-009	18CTPMW15_120820	12/8/2020	1300

Service Request Summary

Folder #: **E2001211**
Client Name: ALS Environmental - US
Project Name: HS20120486
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/10/20
Internal Due Date: 12/23/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120486
EDD: No EDD Specified

11 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 2B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001211-001	MW5_120820	Ground Water	12/08/20 0725	**IV**
E2001211-002	18CPTMW08DW_120820	Ground Water	12/08/20 0815	**IV**
E2001211-003	18CPTMW08SW_120820	Ground Water	12/08/20 0900	**IV**
E2001211-004	18CPTMW08SW_120820_a	Ground Water	12/08/20 0900	**IV**
E2001211-005	MW23_120820	Ground Water	12/08/20 0950	**IV**
E2001211-006	MW16_120820	Ground Water	12/08/20 1035	**IV**
E2001211-007	18CPTMW23_120820	Ground Water	12/08/20 1125	**IV**
E2001211-008	18WW24_120820	Ground Water	12/08/20 1210	**IV**
E2001211-009	18CTPMW15_120820	Ground Water	12/08/20 1300	**IV**

Service Request Summary

Folder #: **E2001211**
Client Name: ALS Environmental - US
Project Name: HS20120486
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/10/20
Internal Due Date: 12/23/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120486
EDD: No EDD Specified

11 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 2B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	MS/MSD

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
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Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15307**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120486
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120486-01**	**MW5_120820**	**Groundwater**	**08 Dec 2020 07:25**
	SUB_Perch-6850			23 Dec 2020
2.	**HS20120486-02**	**18CPTMW08DW_120820**	**Groundwater**	**08 Dec 2020 08:15**
	Provide Level II and Level IV reports in separate pdf			23 Dec 2020
3.	**HS20120486-03**	**18CTPMW08SW_120820**	**Groundwater**	**08 Dec 2020 09:00**
	SUB_Perch-6850			23 Dec 2020
4.	**HS20120486-04**	**18CTPMW08SW_120820_a**	**Groundwater**	**08 Dec 2020 09:00**
	SUB_Perch-6850			23 Dec 2020
5.	**HS20120486-05**	**MW23_120820**	**Groundwater**	**08 Dec 2020 09:50**
	SUB_Perch-6850			23 Dec 2020
6.	**HS20120486-06**	**MW16_120820**	**Groundwater**	**08 Dec 2020 10:35**
	SUB_Perch-6850			23 Dec 2020
7.	**HS20120486-07**	**18CPTMW23_120820**	**Groundwater**	**08 Dec 2020 11:25**
	SUB_Perch-6850			23 Dec 2020
8.	**HS20120486-08**	**18WW24_120820**	**Groundwater**	**08 Dec 2020 12:10**
	SUB_Perch-6850			23 Dec 2020
9.	**HS20120486-09**	**18CTPMW15_120820**	**Groundwater**	**08 Dec 2020 13:00**

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15307**

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
SUB_Perch-6850			23 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. [illegible] Date/Time: 12/10/20 09:30

Received By: CG Date/Time: 12/10/20 [illegible]

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS - H

Thermometer ID 1831

Date/Time Received: 12/10/20 Initials: CH Date/Time Logged in: 12/10/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ✓ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/10/20	0930	CH	1.8	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
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Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001208-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001209-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001210-001	LH18/24-SP140_120820	.01	6850/ClO4 DOD			Water	10mL	
4	E2001211-001	MW5_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001211-002	18CPTMW08DW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001211-003	18CPTMW08SW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001211-004	18CPTMW08SW_120820_a	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001211-005	MW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001211-006	MW16_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001211-007	18CPTMW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001211-008	18WW24_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001211-009	18CTPMW15_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001217-001	18CPTMW04_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001217-002	18CPTMW04SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001217-003	AWD3_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001217-004	AWD3_120920_a	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001217-005	MW10_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001217-006	18CPTMW12SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2001217-007	18CPTMW12DW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2001217-008	MW7_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2000677-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000677-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2000677-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000677-02 1.00µL EQ2000677-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001208-001	100.00µL	E2001209-001	100.00µL	E2001210-001	100.00µL	E2001211-001	100.00µL	E2001211-002	100.00µL	E2001211-003	100.00µL
E2001211-004	100.00µL	E2001211-005	100.00µL	E2001211-006	100.00µL	E2001211-007	100.00µL	E2001211-008	100.00µL	E2001211-009	100.00µL
E2001217-001	100.00µL	E2001217-002	100.00µL	E2001217-003	100.00µL	E2001217-004	100.00µL	E2001217-005	100.00µL	E2001217-006	100.00µL
E2001217-007	100.00µL	E2001217-008	100.00µL	EQ2000677-01	100.00µL	EQ2000677-02	100.00µL	EQ2000677-03	100.00µL		

Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

Preparation Steps

Step: Preparation
Started: 12/15/20 08:58
Finished: 12/15/20 11:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/15/20

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 0725
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	MW5_120820	**Units:**	µg/L
Lab Code:	E2001211-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**23200**		100	50.0	25.0	1000	12/15/20	12/21/20 10:23	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 0815
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CPTMW08DW_120820	**Units:**	µg/L
Lab Code:	E2001211-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**2640**		10.0	5.00	2.50	100	12/15/20	12/21/20 10:31	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 0900
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CPTMW08SW_120820	**Units:**	µg/L
Lab Code:	E2001211-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**18000**		100	50.0	25.0	1000	12/15/20	12/21/20 10:39	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 0900
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CPTMW08SW_120820_a	**Units:**	µg/L
Lab Code:	E2001211-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**18400**		100	50.0	25.0	1000	12/15/20	12/21/20 10:47	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 0950
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	MW23_120820	**Units:**	µg/L
Lab Code:	E2001211-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**66900**		200	100	50.0	2000	12/15/20	12/21/20 11:10	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 1035
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	MW16_120820	**Units:**	µg/L
Lab Code:	E2001211-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1.07**		0.200	0.100	0.0500	2	12/15/20	12/21/20 11:18	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 1125
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CPTMW23_120820	**Units:**	µg/L
Lab Code:	E2001211-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**80.8**		0.500	0.250	0.125	5	12/15/20	12/21/20 11:26	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 1210
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18WW24_120820	**Units:**	µg/L
Lab Code:	E2001211-008	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.413**	J	1.00	0.500	0.250	10	12/15/20	12/21/20 11:34	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	12/ 8/20 1300
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CTPMW15_120820	**Units:**	µg/L
Lab Code:	E2001211-009	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1.31**		0.500	0.250	0.125	5	12/15/20	12/21/20 11:42	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000677-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/15/20	12/22/20 17:46	371505	708075	

Accuracy & Precision

ALS Environmental - Houston HRMS
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20120486
Sample Matrix: Ground Water

Service Request: E2001211
Date Analyzed: 12/22/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371505

	Lab Control Sample EQ2000677-02			Duplicate Lab Control Sample EQ2000677-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.104	0.100	104	0.0873	0.100	87	84 - 119	17 *	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.104**		0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:07	371505	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001211
Project:	HS20120486	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0873**	J	0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:15	371505	708075	

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December 29, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120556**

Laboratory Results for: **LHAAP 18 24**

Dear Marcia Olive,

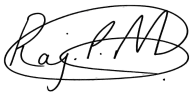
ALS Environmental received 9 sample(s) on Dec 10, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,



Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120556

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120556-01	18CPTMW04_120920	Groundwater		09-Dec-2020 07:25	10-Dec-2020 12:55	☐
HS20120556-02	18CPTMW04SW_120920	Groundwater		09-Dec-2020 08:10	10-Dec-2020 12:55	☐
HS20120556-03	AWD3_120920	Groundwater		09-Dec-2020 09:05	10-Dec-2020 12:55	☐
HS20120556-04	AWD3_120920_a	Groundwater		09-Dec-2020 09:05	10-Dec-2020 12:55	☐
HS20120556-05	MW10_120920	Groundwater		09-Dec-2020 10:00	10-Dec-2020 12:55	☐
HS20120556-06	18CPTMW12SW_120920	Groundwater		09-Dec-2020 10:50	10-Dec-2020 12:55	☐
HS20120556-07	18CPTMW12DW_120920	Groundwater		09-Dec-2020 11:35	10-Dec-2020 12:55	☐
HS20120556-08	MW7_120920	Groundwater		09-Dec-2020 12:25	10-Dec-2020 12:55	☐
HS20120556-09	Trip Blank	Water	CG 102720 -485	09-Dec-2020 00:00	10-Dec-2020 12:55	☐

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: LHAAP 18 24
Work Order: HS20120556

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160571

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R375002

Sample ID: CCV

• 1,2-Dibromo-3-Chloropropane exceeded %D limits for CCV. Samples are ND for this compound.

Sample ID: VLCSW-201218

• 1,2,3-Trichlorobenzene exceeded QC limits for LCS. Samples are ND for this compound.

Batch ID: R375029

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 160930

Sample ID: HS20120486-08MS

• MS/MSD and DUPS are for an unrelated sample

Metals by Method SW7470

Batch ID: 160855

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW04_120920
Collection Date: 09-Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 14:16
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 14:16
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 14:16
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 14:16
1,2-Dichloroethane	**0.51**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 14:16
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 14:16
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 14:16
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 14:16
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 14:16
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 14:16
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 14:16
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 14:16
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 14:16
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 14:16
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW04_120920
Collection Date: 09-Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
cis-1,2-Dichloroethene	**7.5**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 14:16
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 14:16
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 14:16
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 14:16
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 14:16
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Trichloroethene	**200**		**1.0**	**2.5**	**5.0**	**ug/L**	5	20-Dec-2020 15:40
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 14:16
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 14:16
Surr: 1,2-Dichloroethane-d4	*88.5*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 14:16*
Surr: 1,2-Dichloroethane-d4	*90.5*			**0**	*81-118*	*%REC*	*5*	*20-Dec-2020 15:40*
Surr: 4-Bromofluorobenzene	*93.9*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 14:16*
Surr: 4-Bromofluorobenzene	*96.1*			**0**	*85-114*	*%REC*	*5*	*20-Dec-2020 15:40*
Surr: Dibromofluoromethane	*90.7*			**0**	*80-119*	*%REC*	*5*	*20-Dec-2020 15:40*
Surr: Dibromofluoromethane	*89.0*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 14:16*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 14:16*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*5*	*20-Dec-2020 15:40*
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.25**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 17:02
Surr: 2-Fluorobiphenyl	*90.4*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:02*
Surr: 4-Terphenyl-d14	*88.6*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:02*
Surr: Nitrobenzene-d5	*54.0*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:02*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW04_120920
Collection Date: 09-Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW04SW_120920
Collection Date: 09-Dec-2020 08:10

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:55
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 13:55
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 13:55
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 13:55
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:55
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:55
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 13:55
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 13:55
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:55
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 13:55
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 13:55
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:55
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 13:55
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW04SW_120920
Collection Date: 09-Dec-2020 08:10

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 13:55
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 13:55
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 13:55
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:55
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:55
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:55
Surr: 1,2-Dichloroethane-d4	*90.2*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 13:55*
Surr: 4-Bromofluorobenzene	*93.2*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 13:55*
Surr: Dibromofluoromethane	*89.1*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 13:55*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 13:55*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.11**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 17:20
Surr: 2-Fluorobiphenyl	*82.7*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:20*
Surr: 4-Terphenyl-d14	*139*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:20*
Surr: Nitrobenzene-d5	*56.1*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:20*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW04SW_120920
Collection Date: 09-Dec-2020 08:10

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Aluminum	**0.0420**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	24-Dec-2020 11:25
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 11:25
Arsenic	**0.00318**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:25
Barium	**0.767**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:25
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:25
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:25
Calcium	**27.4**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	24-Dec-2020 11:25
Chromium	**0.0276**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:25
Cobalt	**0.00283**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	24-Dec-2020 11:25
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	24-Dec-2020 11:25
Iron	**7.54**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:25
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:25
Magnesium	**18.4**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:25
Manganese	**0.198**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:25
Nickel	**0.00261**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:25
Potassium	**111**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:25
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	24-Dec-2020 11:25
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 11:25
Sodium	**147**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:25
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:25
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:25
Zinc	**0.0160**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:25
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 18-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	18-Dec-2020 19:08
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD3_120920
Collection Date: 09-Dec-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,2-Dichloroethane	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 20:09
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 20:09
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:09
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 20:09
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 20:09
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:09
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 20:09
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 20:09
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:09
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 20:09
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD3_120920
Collection Date: 09-Dec-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
cis-1,2-Dichloroethene	**6.9**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 20:09
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 20:09
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 20:09
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 20:09
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:09
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:09
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Trichloroethene	**140**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 20:09
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:09
Surr: 1,2-Dichloroethane-d4	*90.0*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 20:09*
Surr: 4-Bromofluorobenzene	*92.5*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 20:09*
Surr: Dibromofluoromethane	*88.5*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 20:09*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 20:09*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD3_120920
Collection Date: 09-Dec-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Aluminum	**0.253**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	24-Dec-2020 11:27
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 11:27
Arsenic	**0.000409**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Barium	**0.0449**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:27
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:27
Calcium	**1.06**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	24-Dec-2020 11:27
Chromium	**0.130**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Cobalt	**0.000794**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Copper	**0.00284**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Iron	**0.743**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:27
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:27
Magnesium	**0.639**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:27
Manganese	**0.0118**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Nickel	**0.00967**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Potassium	**0.743**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:27
Selenium	**0.00541**		**0.00110**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 11:27
Sodium	**30.8**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:27
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:27
Vanadium	**0.00133**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
Zinc	**0.00760**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:27
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 18-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	18-Dec-2020 19:15
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD3_120920_a
Collection Date: 09-Dec-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:30
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:30
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 20:30
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 20:30
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-Dec-2020 20:30
1,2-Dichloroethane	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 20:30
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:30
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:30
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 20:30
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-Dec-2020 20:30
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:30
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-Dec-2020 20:30
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 20:30
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:30
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	18-Dec-2020 20:30
Carbon tetrachloride	**3.0**		**0.50**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 20:30
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:30
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD3_120920_a
Collection Date: 09-Dec-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
cis-1,2-Dichloroethene	**6.5**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 20:30
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:30
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:30
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-Dec-2020 20:30
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-Dec-2020 20:30
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	18-Dec-2020 20:30
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-Dec-2020 20:30
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Trichloroethene	**140**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-Dec-2020 20:30
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-Dec-2020 20:30
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-Dec-2020 20:30
Surr: 1,2-Dichloroethane-d4	*90.3*			**0**	*81-118*	*%REC*	*1*	*18-Dec-2020 20:30*
Surr: 4-Bromofluorobenzene	*96.1*			**0**	*85-114*	*%REC*	*1*	*18-Dec-2020 20:30*
Surr: Dibromofluoromethane	*87.5*			**0**	*80-119*	*%REC*	*1*	*18-Dec-2020 20:30*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*18-Dec-2020 20:30*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD3_120920_a
Collection Date: 09-Dec-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Aluminum	**0.315**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	24-Dec-2020 11:29
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 11:29
Arsenic	**0.000430**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Barium	**0.0441**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:29
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:29
Calcium	**0.909**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	24-Dec-2020 11:29
Chromium	**0.153**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Cobalt	**0.000688**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Copper	**0.00251**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Iron	**0.855**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:29
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:29
Magnesium	**0.604**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:29
Manganese	**0.00861**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Nickel	**0.00959**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Potassium	**0.684**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:29
Selenium	**0.00520**		**0.00110**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 11:29
Sodium	**29.9**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:29
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:29
Vanadium	**0.00142**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
Zinc	**0.00453**	J	**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:29
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 18-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	18-Dec-2020 19:17
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW10_120920
Collection Date: 09-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:22
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 16:22
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 16:22
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 16:22
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:22
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:22
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 16:22
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 16:22
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:22
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 16:22
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 16:22
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:22
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 16:22
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW10_120920
Collection Date: 09-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 16:22
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 16:22
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 16:22
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:22
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:22
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Trichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 16:22
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:22
Surr: 1,2-Dichloroethane-d4	*88.8*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 16:22*
Surr: 4-Bromofluorobenzene	*96.4*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 16:22*
Surr: Dibromofluoromethane	*89.6*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 16:22*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 16:22*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.031**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 17:38
Surr: 2-Fluorobiphenyl	*72.6*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:38*
Surr: 4-Terphenyl-d14	*90.7*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:38*
Surr: Nitrobenzene-d5	*55.8*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:38*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW12SW_120920
Collection Date: 09-Dec-2020 10:50

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 16:43
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:43
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 16:43
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 16:43
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:43
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 16:43
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 16:43
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:43
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 16:43
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW12SW_120920
Collection Date: 09-Dec-2020 10:50

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 16:43
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 16:43
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 16:43
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 16:43
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Trichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 16:43
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 16:43
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 16:43
Surr: 1,2-Dichloroethane-d4	*90.5*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 16:43*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 16:43*
Surr: Dibromofluoromethane	*89.9*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 16:43*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 16:43*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.043**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 17:57
Surr: 2-Fluorobiphenyl	*63.6*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:57*
Surr: 4-Terphenyl-d14	*71.1*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:57*
Surr: Nitrobenzene-d5	*62.5*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 17:57*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW12SW_120920
Collection Date: 09-Dec-2020 10:50

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Aluminum	**0.0268**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	24-Dec-2020 11:40
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 11:40
Arsenic	**0.000822**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:40
Barium	**0.998**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:40
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:40
Cadmium	**0.000256**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	24-Dec-2020 11:40
Calcium	**75.8**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	24-Dec-2020 11:40
Chromium	**0.00506**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:40
Cobalt	**0.00250**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	24-Dec-2020 11:40
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	24-Dec-2020 11:40
Iron	**0.559**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:40
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:40
Magnesium	**44.6**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:40
Manganese	**0.719**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:40
Nickel	**0.00954**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:40
Potassium	**66.1**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:40
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	24-Dec-2020 11:40
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 11:40
Sodium	**270**		**0.140**	**0.500**	**2.00**	**mg/L**	10	24-Dec-2020 11:56
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:40
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:40
Zinc	**0.0115**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:40
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 18-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	18-Dec-2020 19:19
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW12DW_120920
Collection Date: 09-Dec-2020 11:35

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:04
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:04
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:04
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:04
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:04
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:04
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:04
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 17:04
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 17:04
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:04
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 17:04
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 17:04
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:04
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 17:04
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:04
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW12DW_120920
Collection Date: 09-Dec-2020 11:35

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:04
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:04
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 17:04
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 17:04
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 17:04
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:04
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:04
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:04
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:04
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:04
Surr: 1,2-Dichloroethane-d4	*89.6*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 17:04*
Surr: 4-Bromofluorobenzene	*94.2*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 17:04*
Surr: Dibromofluoromethane	*91.2*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 17:04*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 17:04*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.039**		**0.010**	**0.010**	**0.010**	**ug/L**	1	11-Dec-2020 18:15
Surr: 2-Fluorobiphenyl	*76.4*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 18:15*
Surr: 4-Terphenyl-d14	*85.3*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 18:15*
Surr: Nitrobenzene-d5	*56.5*			**0**	*40-140*	*%REC*	*1*	*11-Dec-2020 18:15*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW12DW_120920
Collection Date: 09-Dec-2020 11:35

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 21-Dec-2020		Analyst: JHD
Aluminum	**0.0128**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	24-Dec-2020 11:33
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	24-Dec-2020 11:33
Arsenic	**0.00336**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:33
Barium	**0.139**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:33
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:33
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:33
Calcium	**7.32**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	24-Dec-2020 11:33
Chromium	**0.00340**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	24-Dec-2020 11:33
Cobalt	0.000500	U	0.000100	0.000500	0.00500	mg/L	1	24-Dec-2020 11:33
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	24-Dec-2020 11:33
Iron	**1.28**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:33
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:33
Magnesium	**5.88**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:33
Manganese	**0.0453**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	24-Dec-2020 11:33
Nickel	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:33
Potassium	**83.5**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	24-Dec-2020 11:33
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	24-Dec-2020 11:33
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	24-Dec-2020 11:33
Sodium	**210**		**0.140**	**0.500**	**2.00**	**mg/L**	10	24-Dec-2020 11:58
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	24-Dec-2020 11:33
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	24-Dec-2020 11:33
Zinc	0.00250	U	0.00200	0.00250	0.00500	mg/L	1	24-Dec-2020 11:33
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 18-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	18-Dec-2020 19:20
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW7_120920
Collection Date: 09-Dec-2020 12:25

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,1,2,2-Tetrachloroethane	2.5	U	2.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,1,2-Trichloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,1-Dichloropropene	5.0	U	1.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
1,2,3-Trichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	20-Dec-2020 14:37
1,2,3-Trichloropropane	5.0	U	2.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
1,2,4-Trichlorobenzene	5.0	U	2.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
1,2,4-Trimethylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,2-Dichlorobenzene	5.0	U	2.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
1,2-Dichloroethane	**26**		**1.0**	**2.5**	**5.0**	**ug/L**	5	20-Dec-2020 14:37
1,2-Dichloropropane	2.5	U	2.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,3,5-Trimethylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
1,3-Dichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	20-Dec-2020 14:37
1,3-Dichloropropane	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
1,4-Dichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	20-Dec-2020 14:37
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
2-Butanone	5.0	U	2.5	5.0	10	ug/L	5	20-Dec-2020 14:37
2-Chlorotoluene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
2-Hexanone	10	U	5.0	10	10	ug/L	5	20-Dec-2020 14:37
4-Chlorotoluene	5.0	U	2.0	5.0	5.0	ug/L	5	20-Dec-2020 14:37
4-Isopropyltoluene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
4-Methyl-2-pentanone	10	U	3.5	10	10	ug/L	5	20-Dec-2020 14:37
Acetone	5.0	U	2.0	5.0	10	ug/L	5	20-Dec-2020 14:37
Benzene	**7.4**		**1.0**	**2.5**	**5.0**	**ug/L**	5	20-Dec-2020 14:37
Bromobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	20-Dec-2020 14:37
Bromochloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Bromodichloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Bromoform	2.5	U	2.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Bromomethane	2.5	U	2.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Carbon disulfide	5.0	U	3.0	5.0	10	ug/L	5	20-Dec-2020 14:37
Carbon tetrachloride	2.5	U	2.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Chlorobenzene	5.0	U	1.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
Chloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Chloroform	**15**		**1.0**	**2.5**	**5.0**	**ug/L**	5	20-Dec-2020 14:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW7_120920
Collection Date: 09-Dec-2020 12:25

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
cis-1,2-Dichloroethene	**23**		**1.0**	**2.5**	**5.0**	**ug/L**	5	20-Dec-2020 14:37
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Dibromochloromethane	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Dibromomethane	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Dichlorodifluoromethane	5.0	U	1.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
Ethylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	ug/L	5	20-Dec-2020 14:37
Isopropylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
m,p-Xylene	5.0	U	2.5	5.0	10	ug/L	5	20-Dec-2020 14:37
Methylene chloride	5.0	U	2.0	5.0	10	ug/L	5	20-Dec-2020 14:37
n-Butylbenzene	5.0	U	2.0	5.0	5.0	ug/L	5	20-Dec-2020 14:37
n-Propylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
Naphthalene	5.0	U	1.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
o-Xylene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
sec-Butylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Styrene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
tert-Butylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
Tetrachloroethene	2.5	U	1.5	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Toluene	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
trans-1,2-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Trichloroethene	**2,700**		**10**	**25**	**50**	**ug/L**	50	20-Dec-2020 16:01
Trichlorofluoromethane	5.0	U	1.5	5.0	5.0	ug/L	5	20-Dec-2020 14:37
Vinyl chloride	2.5	U	1.0	2.5	5.0	ug/L	5	20-Dec-2020 14:37
Surr: 1,2-Dichloroethane-d4	*88.3*			**0**	*81-118*	*%REC*	*5*	*20-Dec-2020 14:37*
Surr: 1,2-Dichloroethane-d4	*89.1*			**0**	*81-118*	*%REC*	*50*	*20-Dec-2020 16:01*
Surr: 4-Bromofluorobenzene	*93.6*			**0**	*85-114*	*%REC*	*5*	*20-Dec-2020 14:37*
Surr: 4-Bromofluorobenzene	*95.2*			**0**	*85-114*	*%REC*	*50*	*20-Dec-2020 16:01*
Surr: Dibromofluoromethane	*88.9*			**0**	*80-119*	*%REC*	*5*	*20-Dec-2020 14:37*
Surr: Dibromofluoromethane	*88.1*			**0**	*80-119*	*%REC*	*50*	*20-Dec-2020 16:01*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*5*	*20-Dec-2020 14:37*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*50*	*20-Dec-2020 16:01*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 10-Dec-2020		Analyst: ACN
1,4-Dioxane	**1.2**		**0.10**	**0.10**	**0.10**	**ug/L**	10	14-Dec-2020 14:28
Surr: 2-Fluorobiphenyl	*126*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 14:28*
Surr: 4-Terphenyl-d14	*93.5*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 14:28*
Surr: Nitrobenzene-d5	*64.0*			**0**	*40-140*	*%REC*	*10*	*14-Dec-2020 14:28*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW7_120920
Collection Date: 09-Dec-2020 12:25

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 09-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-09
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:33
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 13:33
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 13:33
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 13:33
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:33
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:33
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 13:33
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 13:33
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:33
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 13:33
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 13:33
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:33
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 13:33
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 09-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120556
Lab ID:HS20120556-09
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 13:33
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 13:33
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 13:33
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 13:33
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 13:33
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 13:33
Surr: 1,2-Dichloroethane-d4	*87.2*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 13:33*
Surr: 4-Bromofluorobenzene	*95.5*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 13:33*
Surr: Dibromofluoromethane	*87.5*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 13:33*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 13:33*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

Batch ID: 160571 **Start Date:** 10 Dec 2020 10:30 **End Date:** 10 Dec 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120556-01	1	1000 (mL)	1 (mL)	0.001
HS20120556-02	1	1000 (mL)	1 (mL)	0.001
HS20120556-05	1	1000 (mL)	1 (mL)	0.001
HS20120556-06	1	1000 (mL)	1 (mL)	0.001
HS20120556-07	1	1000 (mL)	1 (mL)	0.001
HS20120556-08	1	1000 (mL)	1 (mL)	0.001

Batch ID: 160855 **Start Date:** 18 Dec 2020 10:00 **End Date:** 18 Dec 2020 12:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120556-02		10 (mL)	10 (mL)	1
HS20120556-03		10 (mL)	10 (mL)	1
HS20120556-04		10 (mL)	10 (mL)	1
HS20120556-06		10 (mL)	10 (mL)	1
HS20120556-07		10 (mL)	10 (mL)	1

Batch ID: 160930 **Start Date:** 21 Dec 2020 13:00 **End Date:** 21 Dec 2020 17:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120556-02		10 (mL)	10 (mL)	1
HS20120556-03		10 (mL)	10 (mL)	1
HS20120556-04		10 (mL)	10 (mL)	1
HS20120556-06		10 (mL)	10 (mL)	1
HS20120556-07		10 (mL)	10 (mL)	1

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160571 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Groundwater	
HS20120556-01	18CPTMW04_120920	09 Dec 2020 07:25		10 Dec 2020 10:30	11 Dec 2020 17:02	1
HS20120556-02	18CPTMW04SW_120920	09 Dec 2020 08:10		10 Dec 2020 10:30	11 Dec 2020 17:20	1
HS20120556-05	MW10_120920	09 Dec 2020 10:00		10 Dec 2020 10:30	11 Dec 2020 17:38	1
HS20120556-06	18CPTMW12SW_120920	09 Dec 2020 10:50		10 Dec 2020 10:30	11 Dec 2020 17:57	1
HS20120556-07	18CPTMW12DW_120920	09 Dec 2020 11:35		10 Dec 2020 10:30	11 Dec 2020 18:15	1
HS20120556-08	MW7_120920	09 Dec 2020 12:25		10 Dec 2020 10:30	14 Dec 2020 14:28	10
Batch ID: 160855 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Groundwater	
HS20120556-02	18CPTMW04SW_120920	09 Dec 2020 08:10		18 Dec 2020 10:00	18 Dec 2020 19:08	1
HS20120556-03	AWD3_120920	09 Dec 2020 09:05		18 Dec 2020 10:00	18 Dec 2020 19:15	1
HS20120556-04	AWD3_120920_a	09 Dec 2020 09:05		18 Dec 2020 10:00	18 Dec 2020 19:17	1
HS20120556-06	18CPTMW12SW_120920	09 Dec 2020 10:50		18 Dec 2020 10:00	18 Dec 2020 19:19	1
HS20120556-07	18CPTMW12DW_120920	09 Dec 2020 11:35		18 Dec 2020 10:00	18 Dec 2020 19:20	1
Batch ID: 160930 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20120556-02	18CPTMW04SW_120920	09 Dec 2020 08:10		21 Dec 2020 17:00	24 Dec 2020 11:25	1
HS20120556-03	AWD3_120920	09 Dec 2020 09:05		21 Dec 2020 17:00	24 Dec 2020 11:27	1
HS20120556-04	AWD3_120920_a	09 Dec 2020 09:05		21 Dec 2020 17:00	24 Dec 2020 11:29	1
HS20120556-06	18CPTMW12SW_120920	09 Dec 2020 10:50		21 Dec 2020 17:00	24 Dec 2020 11:56	10
HS20120556-06	18CPTMW12SW_120920	09 Dec 2020 10:50		21 Dec 2020 17:00	24 Dec 2020 11:40	1
HS20120556-07	18CPTMW12DW_120920	09 Dec 2020 11:35		21 Dec 2020 17:00	24 Dec 2020 11:58	10
HS20120556-07	18CPTMW12DW_120920	09 Dec 2020 11:35		21 Dec 2020 17:00	24 Dec 2020 11:33	1
Batch ID: R375002 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120556-03	AWD3_120920	09 Dec 2020 09:05			18 Dec 2020 20:09	1
HS20120556-04	AWD3_120920_a	09 Dec 2020 09:05			18 Dec 2020 20:30	1
Batch ID: R375029 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120556-09	Trip Blank	09 Dec 2020 00:00			20 Dec 2020 13:33	1
Batch ID: R375029 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120556-01	18CPTMW04_120920	09 Dec 2020 07:25			20 Dec 2020 15:40	5
HS20120556-01	18CPTMW04_120920	09 Dec 2020 07:25			20 Dec 2020 14:16	1
HS20120556-02	18CPTMW04SW_120920	09 Dec 2020 08:10			20 Dec 2020 13:55	1
HS20120556-05	MW10_120920	09 Dec 2020 10:00			20 Dec 2020 16:22	1
HS20120556-06	18CPTMW12SW_120920	09 Dec 2020 10:50			20 Dec 2020 16:43	1
HS20120556-07	18CPTMW12DW_120920	09 Dec 2020 11:35			20 Dec 2020 17:04	1
HS20120556-08	MW7_120920	09 Dec 2020 12:25			20 Dec 2020 16:01	50
HS20120556-08	MW7_120920	09 Dec 2020 12:25			20 Dec 2020 14:37	5

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375271 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS20120556-01	18CPTMW04_120920	09 Dec 2020 07:25			23 Dec 2020 16:16	1
HS20120556-02	18CPTMW04SW_120920	09 Dec 2020 08:10			23 Dec 2020 16:16	1
HS20120556-03	AWD3_120920	09 Dec 2020 09:05			23 Dec 2020 16:16	1
HS20120556-04	AWD3_120920_a	09 Dec 2020 09:05			23 Dec 2020 16:16	1
HS20120556-05	MW10_120920	09 Dec 2020 10:00			23 Dec 2020 16:16	1
HS20120556-06	18CPTMW12SW_120920	09 Dec 2020 10:50			23 Dec 2020 16:16	1
HS20120556-07	18CPTMW12DW_120920	09 Dec 2020 11:35			23 Dec 2020 16:16	1
HS20120556-08	MW7_120920	09 Dec 2020 12:25			23 Dec 2020 16:16	1

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: 160855 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-160855** Units: **mg/L** Analysis Date: **18-Dec-2020 18:54**
Client ID: Run ID: **HG03_374971** SeqNo: **5888945** PrepDate: **18-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-160855** Units: **mg/L** Analysis Date: **18-Dec-2020 18:57**
Client ID: Run ID: **HG03_374971** SeqNo: **5888946** PrepDate: **18-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.000200	0.005	0	99.6	82 - 119				

MS Sample ID: **HS20120486-08MS** Units: **mg/L** Analysis Date: **18-Dec-2020 19:02**
Client ID: Run ID: **HG03_374971** SeqNo: **5888949** PrepDate: **18-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00501	0.000200	0.005	0.000002000	100	82 - 119				

MSD Sample ID: **HS20120486-08MSD** Units: **mg/L** Analysis Date: **18-Dec-2020 19:06**
Client ID: Run ID: **HG03_374971** SeqNo: **5888950** PrepDate: **18-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00492	0.000200	0.005	0.000002000	98.4	82 - 119	0.005010	1.81	20	

The following samples were analyzed in this batch: HS20120556-02 HS20120556-03 HS20120556-04 HS20120556-06 HS20120556-07

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160930** Units: **mg/L** Analysis Date: **24-Dec-2020 10:49**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897738** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.00500	0.0100								U
Antimony	0.00100	0.00500								U
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Copper	0.00250	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.0500	0.200								U
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.0500	0.200								U
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-160930** Units: **mg/L** Analysis Date: **24-Dec-2020 10:51**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897739** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1007	0.0100	0.1	0	101	84 - 117				
Antimony	0.04756	0.00500	0.05	0	95.1	85 - 117				
Arsenic	0.05162	0.00500	0.05	0	103	84 - 116				
Barium	0.047	0.00500	0.05	0	94.0	86 - 114				
Beryllium	0.0503	0.00200	0.05	0	101	83 - 121				
Cadmium	0.04986	0.00200	0.05	0	99.7	87 - 115				
Calcium	4.769	0.500	5	0	95.4	87 - 118				
Chromium	0.04503	0.00500	0.05	0	90.1	85 - 116				
Cobalt	0.04575	0.00500	0.05	0	91.5	86 - 115				
Copper	0.04806	0.00500	0.05	0	96.1	85 - 118				
Iron	4.679	0.200	5	0	93.6	87 - 118				
Lead	0.04482	0.00500	0.05	0	89.6	88 - 115				
Magnesium	4.696	0.200	5	0	93.9	83 - 118				
Manganese	0.0471	0.00500	0.05	0	94.2	87 - 115				
Nickel	0.04733	0.00500	0.05	0	94.7	85 - 117				
Potassium	4.621	0.200	5	0	92.4	87 - 115				
Selenium	0.05751	0.00500	0.05	0	115	80 - 120				
Silver	0.04736	0.00500	0.05	0	94.7	85 - 116				
Sodium	4.535	0.200	5	0	90.7	85 - 117				
Thallium	0.04191	0.00200	0.05	0	83.8	82 - 116				
Vanadium	0.04439	0.00500	0.05	0	88.8	86 - 115				
Zinc	0.05143	0.00500	0.05	0	103	83 - 119				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20120486-08MS** Units: **mg/L** Analysis Date: **24-Dec-2020 10:59**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897743** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4012	0.0100	0.2	0.1505	125	84 - 117				S
Antimony	0.04781	0.00500	0.05	0.000135	95.4	85 - 117				
Arsenic	0.05393	0.00500	0.05	0.000759	106	84 - 116				
Barium	0.103	0.00500	0.05	0.05047	105	86 - 114				
Beryllium	0.05695	0.00200	0.05	0.00114	112	83 - 121				
Cadmium	0.04739	0.00200	0.05	0.000252	94.3	87 - 115				
Calcium	62.06	0.500	5	46.14	318	87 - 118				SO
Chromium	0.04762	0.00500	0.05	0.000225	94.8	85 - 116				
Cobalt	0.06064	0.00500	0.05	0.01437	92.5	86 - 115				
Copper	0.04852	0.00500	0.05	0.002096	92.9	85 - 118				
Iron	5.152	0.200	5	0.2228	98.6	87 - 118				
Lead	0.04857	0.00500	0.05	0.000139	96.9	88 - 115				
Magnesium	50.79	0.200	5	51.19	-7.98	83 - 118				SO
Manganese	5.449	0.00500	0.05	5.178	541	87 - 115				SEO
Nickel	0.2144	0.00500	0.05	0.196	36.6	85 - 117				S
Potassium	5.772	0.200	5	0.5352	105	87 - 115				
Selenium	0.05414	0.00500	0.05	-0.000434	109	80 - 120				
Silver	0.04515	0.00500	0.05	0.000029	90.2	85 - 116				
Sodium	803.3	0.200	5	857.4	-1080	85 - 117				SEO
Thallium	0.04546	0.00200	0.05	0.000023	90.9	82 - 116				
Vanadium	0.05019	0.00500	0.05	0.000395	99.6	86 - 115				
Zinc	0.11	0.00500	0.05	0.07624	67.6	83 - 119				S

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20120486-08MSD** Units: **mg/L** Analysis Date: **24-Dec-2020 11:15**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897749** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4017	0.0100	0.2	0.1505	126	84 - 117	0.4012	0.108	20	S
Antimony	0.04871	0.00500	0.05	0.000135	97.2	85 - 117	0.04781	1.86	20	
Arsenic	0.05396	0.00500	0.05	0.000759	106	84 - 116	0.05393	0.0445	20	
Barium	0.1028	0.00500	0.05	0.05047	105	86 - 114	0.103	0.203	20	
Beryllium	0.05802	0.00200	0.05	0.00114	114	83 - 121	0.05695	1.86	20	
Cadmium	0.04716	0.00200	0.05	0.000252	93.8	87 - 115	0.04739	0.491	20	
Calcium	61.93	0.500	5	46.14	316	87 - 118	62.06	0.208	20	SO
Chromium	0.04758	0.00500	0.05	0.000225	94.7	85 - 116	0.04762	0.0672	20	
Cobalt	0.06048	0.00500	0.05	0.01437	92.2	86 - 115	0.06064	0.267	20	
Copper	0.04877	0.00500	0.05	0.002096	93.4	85 - 118	0.04852	0.516	20	
Iron	5.159	0.200	5	0.2228	98.7	87 - 118	5.152	0.131	20	
Lead	0.04779	0.00500	0.05	0.000139	95.3	88 - 115	0.04857	1.63	20	
Magnesium	51.14	0.200	5	51.19	-0.990	83 - 118	50.79	0.686	20	SO
Manganese	5.435	0.00500	0.05	5.178	513	87 - 115	5.449	0.259	20	SEO
Nickel	0.2132	0.00500	0.05	0.196	34.3	85 - 117	0.2144	0.54	20	S
Potassium	5.777	0.200	5	0.5352	105	87 - 115	5.772	0.088	20	
Selenium	0.0537	0.00500	0.05	-0.000434	108	80 - 120	0.05414	0.807	20	
Silver	0.04497	0.00500	0.05	0.000029	89.9	85 - 116	0.04515	0.408	20	
Sodium	814.1	0.200	5	857.4	-867	85 - 117	803.3	1.34	20	SEO
Thallium	0.04442	0.00200	0.05	0.000023	88.8	82 - 116	0.04546	2.31	20	
Vanadium	0.05032	0.00500	0.05	0.000395	99.8	86 - 115	0.05019	0.243	20	
Zinc	0.108	0.00500	0.05	0.07624	63.5	83 - 119	0.11	1.88	20	S

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20120486-08PDS** Units: **mg/L** Analysis Date: **24-Dec-2020 11:03**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897745** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.372	0.0100	0.2	0.1505	111	80 - 120				
Antimony	0.09368	0.00500	0.1	0.000135	93.5	80 - 120				
Arsenic	0.1166	0.00500	0.1	0.000759	116	80 - 120				
Barium	0.1627	0.00500	0.1	0.05047	112	80 - 120				
Beryllium	0.1165	0.00200	0.1	0.00114	115	80 - 120				
Cadmium	0.1011	0.00200	0.1	0.000252	101	80 - 120				
Calcium	69.94	0.500	10	46.14	238	80 - 120				SO
Chromium	0.1042	0.00500	0.1	0.000225	104	80 - 120				
Cobalt	0.116	0.00500	0.1	0.01437	102	80 - 120				
Copper	0.1042	0.00500	0.1	0.002096	102	80 - 120				
Iron	10.81	0.200	10	0.2228	106	80 - 120				
Lead	0.109	0.00500	0.1	0.000139	109	80 - 120				
Magnesium	59.22	0.200	10	51.19	80.3	80 - 120				O
Potassium	11.59	0.200	10	0.5352	111	80 - 120				
Selenium	0.1159	0.00500	0.1	-0.000434	116	80 - 120				
Silver	0.09472	0.00500	0.1	0.000029	94.7	80 - 120				
Thallium	0.1093	0.00200	0.1	0.000023	109	80 - 120				
Vanadium	0.1096	0.00500	0.1	0.000395	109	80 - 120				
Zinc	0.1684	0.00500	0.1	0.07624	92.2	80 - 120				

PDS Sample ID: **HS20120486-08PDS** Units: **mg/L** Analysis Date: **24-Dec-2020 11:54**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897764** PrepDate: **21-Dec-2020** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	9.761	0.250	5	5.126	92.7	80 - 120				
Sodium	1225	10.0	500	755.4	93.9	80 - 120				

PDS Sample ID: **HS20120486-08PDS** Units: **mg/L** Analysis Date: **28-Dec-2020 17:09**
Client ID: Run ID: **ICPMS05_375466** SeqNo: **5900648** PrepDate: **21-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nickel	0.2774	0.00500	0.1	0.1632	114	80 - 120				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: 160930 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20120486-08SD** Units: **mg/L** Analysis Date: **24-Dec-2020 16:12**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5898069** PrepDate: **21-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.1522	0.0500					0.1505	1.14	10	
Antimony	0.00500	0.0250					0.000135	0	10	U
Arsenic	0.00500	0.0250					0.000759	0	10	U
Barium	0.05135	0.0250					0.05047	1.74	10	
Beryllium	0.00250	0.0100					0.00114	0	10	U
Cadmium	0.00250	0.0100					0.000252	0	10	U
Calcium	47.85	2.50					46.14	3.71	10	
Chromium	0.00500	0.0250					0.000225	0	10	U
Cobalt	0.01416	0.0250					0.01437	0	10	J
Copper	0.0125	0.0250					0.002096	0	10	U
Iron	0.2207	1.00					0.2228	0	10	J
Lead	0.00500	0.0250					0.000139	0	10	U
Magnesium	49.67	1.00					51.19	2.96	10	
Manganese	5.251	0.0250					5.178	1.4	10	
Nickel	0.1869	0.0250					0.196	4.64	10	
Potassium	0.5551	1.00					0.5352	0	10	J
Selenium	0.0125	0.0250					-0.000434	0	10	U
Silver	0.00250	0.0250					0.000029	0	10	U
Sodium	832	1.00					857.4	2.97	10	
Thallium	0.00250	0.0100					0.000023	0	10	U
Vanadium	0.00500	0.0250					0.000395	0	10	U
Zinc	0.07837	0.0250					0.07624	2.8	10	

SD Sample ID: **HS20120486-08SD** Units: **mg/L** Analysis Date: **24-Dec-2020 11:52**
Client ID: Run ID: **ICPMS05_375348** SeqNo: **5897763** PrepDate: **21-Dec-2020** DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Manganese	5.221	1.25					5.126	1.85	10	
Sodium	787.8	50.0					755.4	4.29	10	

The following samples were analyzed in this batch: HS20120556-02 HS20120556-03 HS20120556-04 HS20120556-06 HS20120556-07

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: 160571 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:13**
Client ID: Run ID: **SV-6_374543** SeqNo: **5884129** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.0734*	*0*	*0.08*	*0*	*91.7*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07746*	*0*	*0.08*	*0*	*96.8*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07901*	*0*	*0.08*	*0*	*98.8*	*40 - 140*				

LCS Sample ID: **LCS-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:31**
Client ID: Run ID: **SV-6_374543** SeqNo: **5902299** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.05443	0.010	0.08	0	68.0	40 - 140				
Surr: 2-Fluorobiphenyl	*0.07902*	*0*	*0.08*	*0*	*98.8*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.0831*	*0*	*0.08*	*0*	*104*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07701*	*0*	*0.08*	*0*	*96.3*	*40 - 140*				

LCSD Sample ID: **LCSD-160571** Units: **ug/L** Analysis Date: **11-Dec-2020 12:49**
Client ID: Run ID: **SV-6_374543** SeqNo: **5902300** PrepDate: **10-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.05387	0.010	0.08	0	67.3	40 - 140	0.05443	1.03	20	
Surr: 2-Fluorobiphenyl	*0.08157*	*0*	*0.08*	*0*	*102*	*40 - 140*	*0.07902*	*3.17*	*20*	
Surr: 4-Terphenyl-d14	*0.08221*	*0*	*0.08*	*0*	*103*	*40 - 140*	*0.0831*	*1.08*	*20*	
Surr: Nitrobenzene-d5	*0.08435*	*0*	*0.08*	*0*	*105*	*40 - 140*	*0.07701*	*9.1*	*20*	

The following samples were analyzed in this batch: HS20120556-01 HS20120556-02 HS20120556-05 HS20120556-06 HS20120556-07 HS20120556-08

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:46**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889270** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:46**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889270** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*44.65*	*1.0*	*50*	*0*	*89.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.53*	*1.0*	*50*	*0*	*93.1*	*85 - 114*				
Surr: Dibromofluoromethane	*43.66*	*1.0*	*50*	*0*	*87.3*	*80 - 119*				
Surr: Toluene-d8	*51.01*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:04**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889269** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.81	1.0	20	0	99.0	78 - 124				
1,1,1-Trichloroethane	20.86	1.0	20	0	104	74 - 131				
1,1,2,2-Tetrachloroethane	20.55	1.0	20	0	103	71 - 121				
1,1,2-Trichloroethane	20.74	1.0	20	0	104	80 - 119				
1,1-Dichloroethane	21.36	1.0	20	0	107	77 - 125				
1,1-Dichloroethene	19.61	1.0	20	0	98.1	71 - 131				
1,1-Dichloropropene	20.92	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	26.4	1.0	20	0	132	69 - 129				S
1,2,3-Trichloropropane	20.56	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	22.93	1.0	20	0	115	69 - 130				
1,2,4-Trimethylbenzene	19.93	1.0	20	0	99.6	76 - 124				
1,2-Dibromo-3-chloropropane	22.97	1.0	20	0	115	62 - 128				
1,2-Dibromoethane	21.46	1.0	20	0	107	77 - 121				
1,2-Dichlorobenzene	19.45	1.0	20	0	97.3	80 - 119				
1,2-Dichloroethane	21.92	1.0	20	0	110	73 - 128				
1,2-Dichloropropane	21.3	1.0	20	0	106	78 - 122				
1,3,5-Trimethylbenzene	18.94	1.0	20	0	94.7	75 - 124				
1,3-Dichlorobenzene	19.32	1.0	20	0	96.6	80 - 119				
1,3-Dichloropropane	21.36	1.0	20	0	107	80 - 119				
1,4-Dichlorobenzene	19.81	1.0	20	0	99.1	79 - 118				
2,2-Dichloropropane	21.66	1.0	20	0	108	60 - 139				
2-Butanone	47.29	2.0	40	0	118	56 - 143				
2-Chlorotoluene	20.21	1.0	20	0	101	79 - 122				
2-Hexanone	40.39	2.0	40	0	101	57 - 139				
4-Chlorotoluene	19.55	1.0	20	0	97.8	78 - 122				
4-Isopropyltoluene	18.73	1.0	20	0	93.7	77 - 127				
4-Methyl-2-pentanone	41.18	2.0	40	0	103	67 - 130				
Acetone	44.38	2.0	40	0	111	39 - 160				
Benzene	21	1.0	20	0	105	79 - 120				
Bromobenzene	20	1.0	20	0	100.0	80 - 120				
Bromochloromethane	20.27	1.0	20	0	101	78 - 123				
Bromodichloromethane	22.16	1.0	20	0	111	79 - 125				
Bromoform	22.03	1.0	20	0	110	66 - 130				
Bromomethane	21.82	1.0	20	0	109	53 - 141				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201218** Units: **ug/L** Analysis Date: **18-Dec-2020 12:04**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889269** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	46.65	2.0	40	0	117	64 - 133				
Carbon tetrachloride	21.32	1.0	20	0	107	72 - 136				
Chlorobenzene	19.89	1.0	20	0	99.5	82 - 118				
Chloroethane	21.78	1.0	20	0	109	60 - 138				
Chloroform	21.05	1.0	20	0	105	79 - 124				
Chloromethane	16.18	1.0	20	0	80.9	50 - 139				
cis-1,2-Dichloroethene	21.03	1.0	20	0	105	78 - 123				
cis-1,3-Dichloropropene	21.64	1.0	20	0	108	75 - 124				
Dibromochloromethane	20.74	1.0	20	0	104	74 - 126				
Dibromomethane	21.79	1.0	20	0	109	79 - 123				
Dichlorodifluoromethane	20.23	1.0	20	0	101	32 - 152				
Ethylbenzene	19.56	1.0	20	0	97.8	79 - 121				
Hexachlorobutadiene	23.8	1.0	20	0	119	66 - 134				
Isopropylbenzene	18.76	1.0	20	0	93.8	72 - 131				
m,p-Xylene	39.11	2.0	40	0	97.8	80 - 121				
Methylene chloride	20.85	2.0	20	0	104	74 - 124				
Naphthalene	23.83	1.0	20	0	119	61 - 128				
n-Butylbenzene	20.43	1.0	20	0	102	75 - 128				
n-Propylbenzene	19.63	1.0	20	0	98.2	76 - 126				
o-Xylene	19.15	1.0	20	0	95.7	78 - 122				
sec-Butylbenzene	18.94	1.0	20	0	94.7	77 - 126				
Styrene	20.16	1.0	20	0	101	78 - 123				
tert-Butylbenzene	18.48	1.0	20	0	92.4	78 - 124				
Tetrachloroethene	19.34	1.0	20	0	96.7	74 - 129				
Toluene	20.4	1.0	20	0	102	80 - 121				
trans-1,2-Dichloroethene	21.25	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	21.36	1.0	20	0	107	73 - 127				
Trichloroethene	20.17	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	19.51	1.0	20	0	97.6	65 - 141				
Vinyl chloride	20.21	1.0	20	0	101	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.78*	*1.0*	*50*	*0*	*104*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.21*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*50.02*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*48.63*	*1.0*	*50*	*0*	*97.3*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120486-08MS** Units: **ug/L** Analysis Date: **18-Dec-2020 16:17**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889280** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.48	1.0	20	0	97.4	78 - 124				
1,1,1-Trichloroethane	18.94	1.0	20	0	94.7	74 - 131				
1,1,2,2-Tetrachloroethane	18.78	1.0	20	0	93.9	71 - 121				
1,1,2-Trichloroethane	19.24	1.0	20	0	96.2	80 - 119				
1,1-Dichloroethane	17.21	1.0	20	0	86.1	77 - 125				
1,1-Dichloroethene	17.05	1.0	20	0	85.3	71 - 131				
1,1-Dichloropropene	19.6	1.0	20	0	98.0	78 - 125				
1,2,3-Trichlorobenzene	18.62	1.0	20	0	93.1	69 - 129				
1,2,3-Trichloropropane	18.48	1.0	20	0	92.4	73 - 122				
1,2,4-Trichlorobenzene	19.42	1.0	20	0	97.1	69 - 130				
1,2,4-Trimethylbenzene	19.94	1.0	20	0	99.7	76 - 124				
1,2-Dibromo-3-chloropropane	17.29	1.0	20	0	86.5	62 - 128				
1,2-Dibromoethane	18.71	1.0	20	0	93.5	77 - 121				
1,2-Dichlorobenzene	18.64	1.0	20	0	93.2	80 - 119				
1,2-Dichloroethane	18.85	1.0	20	0	94.2	73 - 128				
1,2-Dichloropropane	18.98	1.0	20	0	94.9	78 - 122				
1,3,5-Trimethylbenzene	19.53	1.0	20	0	97.6	75 - 124				
1,3-Dichlorobenzene	19.08	1.0	20	0	95.4	80 - 119				
1,3-Dichloropropane	19.4	1.0	20	0	97.0	80 - 119				
1,4-Dichlorobenzene	19.01	1.0	20	0	95.0	79 - 118				
2,2-Dichloropropane	18.63	1.0	20	0	93.1	60 - 139				
2-Butanone	29.98	2.0	40	0	75.0	56 - 143				
2-Chlorotoluene	20.93	1.0	20	0	105	79 - 122				
2-Hexanone	36.4	2.0	40	0	91.0	57 - 139				
4-Chlorotoluene	20.53	1.0	20	0	103	78 - 122				
4-Isopropyltoluene	19.8	1.0	20	0	99.0	77 - 127				
4-Methyl-2-pentanone	34.28	2.0	40	0	85.7	67 - 130				
Acetone	27.15	2.0	40	0	67.9	39 - 160				
Benzene	19.21	1.0	20	0	96.0	79 - 120				
Bromobenzene	19	1.0	20	0	95.0	80 - 120				
Bromochloromethane	17.93	1.0	20	0	89.7	78 - 123				
Bromodichloromethane	18.82	1.0	20	0	94.1	79 - 125				
Bromoform	18.94	1.0	20	0	94.7	66 - 130				
Bromomethane	19.97	1.0	20	0	99.9	53 - 141				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120486-08MS** Units: **ug/L** Analysis Date: **18-Dec-2020 16:17**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889280** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	36.42	2.0	40	0	91.0	64 - 133				
Carbon tetrachloride	21.49	1.0	20	0	107	72 - 136				
Chlorobenzene	19.39	1.0	20	0	97.0	82 - 118				
Chloroethane	17.78	1.0	20	0	88.9	60 - 138				
Chloroform	17.61	1.0	20	0	88.0	79 - 124				
Chloromethane	13.56	1.0	20	0	67.8	50 - 139				
cis-1,2-Dichloroethene	17.98	1.0	20	0	89.9	78 - 123				
cis-1,3-Dichloropropene	18.7	1.0	20	0	93.5	75 - 124				
Dibromochloromethane	19.09	1.0	20	0	95.4	74 - 126				
Dibromomethane	19.05	1.0	20	0	95.3	79 - 123				
Dichlorodifluoromethane	15.64	1.0	20	0	78.2	32 - 152				
Ethylbenzene	20.83	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	23.56	1.0	20	0	118	66 - 134				
Isopropylbenzene	20.69	1.0	20	0	103	72 - 131				
m,p-Xylene	41.04	2.0	40	0	103	80 - 121				
Methylene chloride	17.14	2.0	20	0	85.7	74 - 124				
Naphthalene	17.17	1.0	20	0	85.9	61 - 128				
n-Butylbenzene	20.83	1.0	20	0	104	75 - 128				
n-Propylbenzene	20.62	1.0	20	0	103	76 - 126				
o-Xylene	19.53	1.0	20	0	97.7	78 - 122				
sec-Butylbenzene	19.9	1.0	20	0	99.5	77 - 126				
Styrene	19.52	1.0	20	0	97.6	78 - 123				
tert-Butylbenzene	20.1	1.0	20	0	101	78 - 124				
Tetrachloroethene	21.83	1.0	20	0	109	74 - 129				
Toluene	20.21	1.0	20	0	101	80 - 121				
trans-1,2-Dichloroethene	18.57	1.0	20	0	92.8	75 - 124				
trans-1,3-Dichloropropene	19.74	1.0	20	0	98.7	73 - 127				
Trichloroethene	21.45	1.0	20	0	107	79 - 123				
Trichlorofluoromethane	17.38	1.0	20	0	86.9	65 - 141				
Vinyl chloride	16.83	1.0	20	0	84.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.55*	*1.0*	*50*	*0*	*91.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.25*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*44.43*	*1.0*	*50*	*0*	*88.9*	*80 - 119*				
Surr: Toluene-d8	*51.62*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120486-08MSD** Units: **ug/L** Analysis Date: **18-Dec-2020 16:38**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889281** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.72	1.0	20	0	93.6	78 - 124	19.48	3.97	20	
1,1,1-Trichloroethane	18.47	1.0	20	0	92.4	74 - 131	18.94	2.48	20	
1,1,2,2-Tetrachloroethane	19.84	1.0	20	0	99.2	71 - 121	18.78	5.5	20	
1,1,2-Trichloroethane	19.16	1.0	20	0	95.8	80 - 119	19.24	0.4	20	
1,1-Dichloroethane	16.88	1.0	20	0	84.4	77 - 125	17.21	1.97	20	
1,1-Dichloroethene	17.08	1.0	20	0	85.4	71 - 131	17.05	0.15	20	
1,1-Dichloropropene	19.57	1.0	20	0	97.9	78 - 125	19.6	0.13	20	
1,2,3-Trichlorobenzene	19.83	1.0	20	0	99.2	69 - 129	18.62	6.32	20	
1,2,3-Trichloropropane	19.16	1.0	20	0	95.8	73 - 122	18.48	3.61	20	
1,2,4-Trichlorobenzene	20.3	1.0	20	0	101	69 - 130	19.42	4.44	20	
1,2,4-Trimethylbenzene	19.84	1.0	20	0	99.2	76 - 124	19.94	0.479	20	
1,2-Dibromo-3-chloropropane	20.24	1.0	20	0	101	62 - 128	17.29	15.7	20	
1,2-Dibromoethane	19.02	1.0	20	0	95.1	77 - 121	18.71	1.69	20	
1,2-Dichlorobenzene	19.14	1.0	20	0	95.7	80 - 119	18.64	2.66	20	
1,2-Dichloroethane	18.71	1.0	20	0	93.5	73 - 128	18.85	0.74	20	
1,2-Dichloropropane	18.87	1.0	20	0	94.3	78 - 122	18.98	0.566	20	
1,3,5-Trimethylbenzene	19.2	1.0	20	0	96.0	75 - 124	19.53	1.7	20	
1,3-Dichlorobenzene	18.98	1.0	20	0	94.9	80 - 119	19.08	0.502	20	
1,3-Dichloropropane	19.29	1.0	20	0	96.4	80 - 119	19.4	0.603	20	
1,4-Dichlorobenzene	19.05	1.0	20	0	95.2	79 - 118	19.01	0.23	20	
2,2-Dichloropropane	18.58	1.0	20	0	92.9	60 - 139	18.63	0.263	20	
2-Butanone	34.24	2.0	40	0	85.6	56 - 143	29.98	13.3	20	
2-Chlorotoluene	20.46	1.0	20	0	102	79 - 122	20.93	2.28	20	
2-Hexanone	35.02	2.0	40	0	87.6	57 - 139	36.4	3.84	20	
4-Chlorotoluene	20.2	1.0	20	0	101	78 - 122	20.53	1.63	20	
4-Isopropyltoluene	18.35	1.0	20	0	91.7	77 - 127	19.8	7.59	20	
4-Methyl-2-pentanone	34.66	2.0	40	0	86.7	67 - 130	34.28	1.12	20	
Acetone	28.74	2.0	40	0	71.8	39 - 160	27.15	5.68	20	
Benzene	18.85	1.0	20	0	94.2	79 - 120	19.21	1.9	20	
Bromobenzene	19.33	1.0	20	0	96.7	80 - 120	19	1.73	20	
Bromochloromethane	17.48	1.0	20	0	87.4	78 - 123	17.93	2.55	20	
Bromodichloromethane	19.78	1.0	20	0	98.9	79 - 125	18.82	5	20	
Bromoform	18.76	1.0	20	0	93.8	66 - 130	18.94	0.975	20	
Bromomethane	19.22	1.0	20	0	96.1	53 - 141	19.97	3.85	20	

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375002 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120486-08MSD** Units: **ug/L** Analysis Date: **18-Dec-2020 16:38**
Client ID: Run ID: **VOA6_375002** SeqNo: **5889281** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	35.75	2.0	40	0	89.4	64 - 133	36.42	1.85	20	
Carbon tetrachloride	21.23	1.0	20	0	106	72 - 136	21.49	1.2	20	
Chlorobenzene	18.38	1.0	20	0	91.9	82 - 118	19.39	5.39	20	
Chloroethane	17.92	1.0	20	0	89.6	60 - 138	17.78	0.797	20	
Chloroform	17.45	1.0	20	0	87.2	79 - 124	17.61	0.907	20	
Chloromethane	13.21	1.0	20	0	66.1	50 - 139	13.56	2.58	20	
cis-1,2-Dichloroethene	17.85	1.0	20	0	89.3	78 - 123	17.98	0.736	20	
cis-1,3-Dichloropropene	18.68	1.0	20	0	93.4	75 - 124	18.7	0.104	20	
Dibromochloromethane	18.34	1.0	20	0	91.7	74 - 126	19.09	4.03	20	
Dibromomethane	19.94	1.0	20	0	99.7	79 - 123	19.05	4.55	20	
Dichlorodifluoromethane	15.93	1.0	20	0	79.7	32 - 152	15.64	1.82	20	
Ethylbenzene	19.75	1.0	20	0	98.7	79 - 121	20.83	5.35	20	
Hexachlorobutadiene	20.2	1.0	20	0	101	66 - 134	23.56	15.4	20	
Isopropylbenzene	19.26	1.0	20	0	96.3	72 - 131	20.69	7.15	20	
m,p-Xylene	38.55	2.0	40	0	96.4	80 - 121	41.04	6.26	20	
Methylene chloride	17.13	2.0	20	0	85.6	74 - 124	17.14	0.0602	20	
Naphthalene	20.84	1.0	20	0	104	61 - 128	17.17	19.3	20	
n-Butylbenzene	19.66	1.0	20	0	98.3	75 - 128	20.83	5.77	20	
n-Propylbenzene	19.99	1.0	20	0	100.0	76 - 126	20.62	3.1	20	
o-Xylene	18.55	1.0	20	0	92.8	78 - 122	19.53	5.17	20	
sec-Butylbenzene	18.88	1.0	20	0	94.4	77 - 126	19.9	5.26	20	
Styrene	18.88	1.0	20	0	94.4	78 - 123	19.52	3.35	20	
tert-Butylbenzene	19.37	1.0	20	0	96.8	78 - 124	20.1	3.72	20	
Tetrachloroethene	20.02	1.0	20	0	100	74 - 129	21.83	8.68	20	
Toluene	19.29	1.0	20	0	96.5	80 - 121	20.21	4.63	20	
trans-1,2-Dichloroethene	17.8	1.0	20	0	89.0	75 - 124	18.57	4.2	20	
trans-1,3-Dichloropropene	18.73	1.0	20	0	93.7	73 - 127	19.74	5.26	20	
Trichloroethene	20.05	1.0	20	0	100	79 - 123	21.45	6.72	20	
Trichlorofluoromethane	17.52	1.0	20	0	87.6	65 - 141	17.38	0.807	20	
Vinyl chloride	17.17	1.0	20	0	85.8	58 - 137	16.83	1.97	20	
Surr: 1,2-Dichloroethane-d4	*44.36*	*1.0*	*50*	*0*	*88.7*	*81 - 118*	*45.55*	*2.64*	*20*	
Surr: 4-Bromofluorobenzene	*50.22*	*1.0*	*50*	*0*	*100*	*85 - 114*	*51.25*	*2.03*	*20*	
Surr: Dibromofluoromethane	*45.19*	*1.0*	*50*	*0*	*90.4*	*80 - 119*	*44.43*	*1.7*	*20*	
Surr: Toluene-d8	*50.42*	*1.0*	*50*	*0*	*101*	*89 - 112*	*51.62*	*2.35*	*20*	

ALS Houston, US Date: 29-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	LHAAP 18 24
WorkOrder:	HS20120556

QC BATCH REPORT

Batch ID:	**R375002 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20120556-03 HS20120556-04

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201220** Units: **ug/L** Analysis Date: **20-Dec-2020 13:12**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890036** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201220** Units: **ug/L** Analysis Date: **20-Dec-2020 13:12**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890036** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.09*	*1.0*	*50*	*0*	*90.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.74*	*1.0*	*50*	*0*	*95.5*	*85 - 114*				
Surr: Dibromofluoromethane	*45.03*	*1.0*	*50*	*0*	*90.1*	*80 - 119*				
Surr: Toluene-d8	*52.47*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201220** Units: **ug/L** Analysis Date: **20-Dec-2020 12:30**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890035** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.87	1.0	20	0	109	78 - 124				
1,1,1-Trichloroethane	20.52	1.0	20	0	103	74 - 131				
1,1,2,2-Tetrachloroethane	22.58	1.0	20	0	113	71 - 121				
1,1,2-Trichloroethane	22.4	1.0	20	0	112	80 - 119				
1,1-Dichloroethane	19.95	1.0	20	0	99.7	77 - 125				
1,1-Dichloroethene	17.75	1.0	20	0	88.7	71 - 131				
1,1-Dichloropropene	20.16	1.0	20	0	101	78 - 125				
1,2,3-Trichlorobenzene	23.98	1.0	20	0	120	69 - 129				
1,2,3-Trichloropropane	22.02	1.0	20	0	110	73 - 122				
1,2,4-Trichlorobenzene	23.64	1.0	20	0	118	69 - 130				
1,2,4-Trimethylbenzene	21.12	1.0	20	0	106	76 - 124				
1,2-Dibromo-3-chloropropane	22.63	1.0	20	0	113	62 - 128				
1,2-Dibromoethane	22.43	1.0	20	0	112	77 - 121				
1,2-Dichlorobenzene	20.61	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	21.88	1.0	20	0	109	73 - 128				
1,2-Dichloropropane	22.15	1.0	20	0	111	78 - 122				
1,3,5-Trimethylbenzene	20.4	1.0	20	0	102	75 - 124				
1,3-Dichlorobenzene	20.92	1.0	20	0	105	80 - 119				
1,3-Dichloropropane	22.18	1.0	20	0	111	80 - 119				
1,4-Dichlorobenzene	21.38	1.0	20	0	107	79 - 118				
2,2-Dichloropropane	20.78	1.0	20	0	104	60 - 139				
2-Butanone	47.4	2.0	40	0	119	56 - 143				
2-Chlorotoluene	22.76	1.0	20	0	114	79 - 122				
2-Hexanone	43.16	2.0	40	0	108	57 - 139				
4-Chlorotoluene	22.02	1.0	20	0	110	78 - 122				
4-Isopropyltoluene	19.29	1.0	20	0	96.4	77 - 127				
4-Methyl-2-pentanone	42.01	2.0	40	0	105	67 - 130				
Acetone	47.36	2.0	40	0	118	39 - 160				
Benzene	21.6	1.0	20	0	108	79 - 120				
Bromobenzene	21.66	1.0	20	0	108	80 - 120				
Bromochloromethane	20.5	1.0	20	0	103	78 - 123				
Bromodichloromethane	22.41	1.0	20	0	112	79 - 125				
Bromoform	22.24	1.0	20	0	111	66 - 130				
Bromomethane	21.84	1.0	20	0	109	53 - 141				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201220** Units: **ug/L** Analysis Date: **20-Dec-2020 12:30**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890035** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	44.27	2.0	40	0	111	64 - 133				
Carbon tetrachloride	21.29	1.0	20	0	106	72 - 136				
Chlorobenzene	21.25	1.0	20	0	106	82 - 118				
Chloroethane	17.69	1.0	20	0	88.4	60 - 138				
Chloroform	21.16	1.0	20	0	106	79 - 124				
Chloromethane	16.07	1.0	20	0	80.4	50 - 139				
cis-1,2-Dichloroethene	20.86	1.0	20	0	104	78 - 123				
cis-1,3-Dichloropropene	22.22	1.0	20	0	111	75 - 124				
Dibromochloromethane	21.79	1.0	20	0	109	74 - 126				
Dibromomethane	22.51	1.0	20	0	113	79 - 123				
Dichlorodifluoromethane	18.2	1.0	20	0	91.0	32 - 152				
Ethylbenzene	21.89	1.0	20	0	109	79 - 121				
Hexachlorobutadiene	23.58	1.0	20	0	118	66 - 134				
Isopropylbenzene	20.01	1.0	20	0	100	72 - 131				
m,p-Xylene	41.63	2.0	40	0	104	80 - 121				
Methylene chloride	20.65	2.0	20	0	103	74 - 124				
Naphthalene	21.84	1.0	20	0	109	61 - 128				
n-Butylbenzene	20.94	1.0	20	0	105	75 - 128				
n-Propylbenzene	21.47	1.0	20	0	107	76 - 126				
o-Xylene	20.95	1.0	20	0	105	78 - 122				
sec-Butylbenzene	19.43	1.0	20	0	97.2	77 - 126				
Styrene	20.93	1.0	20	0	105	78 - 123				
tert-Butylbenzene	20.01	1.0	20	0	100	78 - 124				
Tetrachloroethene	20.69	1.0	20	0	103	74 - 129				
Toluene	21.67	1.0	20	0	108	80 - 121				
trans-1,2-Dichloroethene	20.23	1.0	20	0	101	75 - 124				
trans-1,3-Dichloropropene	22.76	1.0	20	0	114	73 - 127				
Trichloroethene	20.24	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	17.91	1.0	20	0	89.6	65 - 141				
Vinyl chloride	18.59	1.0	20	0	93.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.3*	*1.0*	*50*	*0*	*98.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.49*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*48.92*	*1.0*	*50*	*0*	*97.8*	*80 - 119*				
Surr: Toluene-d8	*50.8*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120556-02MS** Units: **ug/L** Analysis Date: **20-Dec-2020 14:58**
Client ID: **18CPTMW04SW_120920** Run ID: **VOA6_375029** SeqNo: **5890041** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.11	1.0	20	0	95.6	78 - 124				
1,1,1-Trichloroethane	18.41	1.0	20	0	92.0	74 - 131				
1,1,2,2-Tetrachloroethane	18.25	1.0	20	0	91.2	71 - 121				
1,1,2-Trichloroethane	19.32	1.0	20	0	96.6	80 - 119				
1,1-Dichloroethane	17.58	1.0	20	0	87.9	77 - 125				
1,1-Dichloroethene	16.94	1.0	20	0	84.7	71 - 131				
1,1-Dichloropropene	20.31	1.0	20	0	102	78 - 125				
1,2,3-Trichlorobenzene	18.91	1.0	20	0	94.5	69 - 129				
1,2,3-Trichloropropane	17.78	1.0	20	0	88.9	73 - 122				
1,2,4-Trichlorobenzene	20.33	1.0	20	0	102	69 - 130				
1,2,4-Trimethylbenzene	19.51	1.0	20	0	97.6	76 - 124				
1,2-Dibromo-3-chloropropane	16.46	1.0	20	0	82.3	62 - 128				
1,2-Dibromoethane	18.63	1.0	20	0	93.2	77 - 121				
1,2-Dichlorobenzene	17.82	1.0	20	0	89.1	80 - 119				
1,2-Dichloroethane	17.7	1.0	20	0	88.5	73 - 128				
1,2-Dichloropropane	19.42	1.0	20	0	97.1	78 - 122				
1,3,5-Trimethylbenzene	19.09	1.0	20	0	95.5	75 - 124				
1,3-Dichlorobenzene	18.54	1.0	20	0	92.7	80 - 119				
1,3-Dichloropropane	19.58	1.0	20	0	97.9	80 - 119				
1,4-Dichlorobenzene	19.58	1.0	20	0	97.9	79 - 118				
2,2-Dichloropropane	18.88	1.0	20	0	94.4	60 - 139				
2-Butanone	31.98	2.0	40	0	80.0	56 - 143				
2-Chlorotoluene	20.29	1.0	20	0	101	79 - 122				
2-Hexanone	34.81	2.0	40	0	87.0	57 - 139				
4-Chlorotoluene	19.32	1.0	20	0	96.6	78 - 122				
4-Isopropyltoluene	19.86	1.0	20	0	99.3	77 - 127				
4-Methyl-2-pentanone	34.04	2.0	40	0	85.1	67 - 130				
Acetone	23.76	2.0	40	0	59.4	39 - 160				
Benzene	19.03	1.0	20	0	95.2	79 - 120				
Bromobenzene	18.45	1.0	20	0	92.2	80 - 120				
Bromochloromethane	17.19	1.0	20	0	85.9	78 - 123				
Bromodichloromethane	19.39	1.0	20	0	96.9	79 - 125				
Bromoform	18.4	1.0	20	0	92.0	66 - 130				
Bromomethane	19.69	1.0	20	0	98.5	53 - 141				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120556-02MS** Units: **ug/L** Analysis Date: **20-Dec-2020 14:58**
Client ID: **18CPTMW04SW_120920** Run ID: **VOA6_375029** SeqNo: **5890041** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.84	2.0	40	0	94.6	64 - 133				
Carbon tetrachloride	21.07	1.0	20	0	105	72 - 136				
Chlorobenzene	18.7	1.0	20	0	93.5	82 - 118				
Chloroethane	16.33	1.0	20	0	81.7	60 - 138				
Chloroform	17.93	1.0	20	0	89.6	79 - 124				
Chloromethane	12.59	1.0	20	0	63.0	50 - 139				
cis-1,2-Dichloroethene	17.76	1.0	20	0	88.8	78 - 123				
cis-1,3-Dichloropropene	18.4	1.0	20	0	92.0	75 - 124				
Dibromochloromethane	18.57	1.0	20	0	92.8	74 - 126				
Dibromomethane	18.18	1.0	20	0	90.9	79 - 123				
Dichlorodifluoromethane	15.56	1.0	20	0	77.8	32 - 152				
Ethylbenzene	20.8	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	23.13	1.0	20	0	116	66 - 134				
Isopropylbenzene	20.13	1.0	20	0	101	72 - 131				
m,p-Xylene	39.2	2.0	40	0	98.0	80 - 121				
Methylene chloride	17.04	2.0	20	0	85.2	74 - 124				
Naphthalene	16.87	1.0	20	0	84.4	61 - 128				
n-Butylbenzene	21.31	1.0	20	0	107	75 - 128				
n-Propylbenzene	20.87	1.0	20	0	104	76 - 126				
o-Xylene	19.03	1.0	20	0	95.1	78 - 122				
sec-Butylbenzene	20.73	1.0	20	0	104	77 - 126				
Styrene	18.47	1.0	20	0	92.3	78 - 123				
tert-Butylbenzene	20.33	1.0	20	0	102	78 - 124				
Tetrachloroethene	21.71	1.0	20	0	109	74 - 129				
Toluene	20.01	1.0	20	0	100	80 - 121				
trans-1,2-Dichloroethene	18.39	1.0	20	0	91.9	75 - 124				
trans-1,3-Dichloropropene	18.43	1.0	20	0	92.2	73 - 127				
Trichloroethene	19.01	1.0	20	0	95.1	79 - 123				
Trichlorofluoromethane	17.67	1.0	20	0	88.3	65 - 141				
Vinyl chloride	17	1.0	20	0	85.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.64*	*1.0*	*50*	*0*	*89.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.78*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*45.36*	*1.0*	*50*	*0*	*90.7*	*80 - 119*				
Surr: Toluene-d8	*51.44*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120556-02MSD** Units: **ug/L** Analysis Date: **20-Dec-2020 15:19**
Client ID: **18CPTMW04SW_120920** Run ID: **VOA6_375029** SeqNo: **5890042** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.57	1.0	20	0	97.9	78 - 124	19.11	2.39	20	
1,1,1-Trichloroethane	19.09	1.0	20	0	95.5	74 - 131	18.41	3.66	20	
1,1,2,2-Tetrachloroethane	19.83	1.0	20	0	99.1	71 - 121	18.25	8.29	20	
1,1,2-Trichloroethane	19.12	1.0	20	0	95.6	80 - 119	19.32	1.04	20	
1,1-Dichloroethane	16.97	1.0	20	0	84.8	77 - 125	17.58	3.53	20	
1,1-Dichloroethene	16.31	1.0	20	0	81.6	71 - 131	16.94	3.78	20	
1,1-Dichloropropene	20.74	1.0	20	0	104	78 - 125	20.31	2.08	20	
1,2,3-Trichlorobenzene	22.34	1.0	20	0	112	69 - 129	18.91	16.6	20	
1,2,3-Trichloropropane	19.37	1.0	20	0	96.9	73 - 122	17.78	8.55	20	
1,2,4-Trichlorobenzene	21.53	1.0	20	0	108	69 - 130	20.33	5.71	20	
1,2,4-Trimethylbenzene	20.7	1.0	20	0	104	76 - 124	19.51	5.93	20	
1,2-Dibromo-3-chloropropane	19.62	1.0	20	0	98.1	62 - 128	16.46	17.5	20	
1,2-Dibromoethane	18.69	1.0	20	0	93.4	77 - 121	18.63	0.287	20	
1,2-Dichlorobenzene	19.37	1.0	20	0	96.9	80 - 119	17.82	8.35	20	
1,2-Dichloroethane	18.62	1.0	20	0	93.1	73 - 128	17.7	5.03	20	
1,2-Dichloropropane	19.17	1.0	20	0	95.8	78 - 122	19.42	1.28	20	
1,3,5-Trimethylbenzene	20.31	1.0	20	0	102	75 - 124	19.09	6.18	20	
1,3-Dichlorobenzene	19.57	1.0	20	0	97.8	80 - 119	18.54	5.4	20	
1,3-Dichloropropane	20.03	1.0	20	0	100	80 - 119	19.58	2.24	20	
1,4-Dichlorobenzene	20.27	1.0	20	0	101	79 - 118	19.58	3.47	20	
2,2-Dichloropropane	18.99	1.0	20	0	94.9	60 - 139	18.88	0.576	20	
2-Butanone	31.93	2.0	40	0	79.8	56 - 143	31.98	0.182	20	
2-Chlorotoluene	21.55	1.0	20	0	108	79 - 122	20.29	6	20	
2-Hexanone	35.27	2.0	40	0	88.2	57 - 139	34.81	1.32	20	
4-Chlorotoluene	20.03	1.0	20	0	100	78 - 122	19.32	3.59	20	
4-Isopropyltoluene	20.66	1.0	20	0	103	77 - 127	19.86	3.95	20	
4-Methyl-2-pentanone	36.95	2.0	40	0	92.4	67 - 130	34.04	8.19	20	
Acetone	23.49	2.0	40	0	58.7	39 - 160	23.76	1.14	20	
Benzene	19.17	1.0	20	0	95.8	79 - 120	19.03	0.696	20	
Bromobenzene	20.35	1.0	20	0	102	80 - 120	18.45	9.81	20	
Bromochloromethane	16.64	1.0	20	0	83.2	78 - 123	17.19	3.24	20	
Bromodichloromethane	19.76	1.0	20	0	98.8	79 - 125	19.39	1.93	20	
Bromoform	19.38	1.0	20	0	96.9	66 - 130	18.4	5.18	20	
Bromomethane	18.18	1.0	20	0	90.9	53 - 141	19.69	7.98	20	

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120556

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120556-02MSD** Units: **ug/L** Analysis Date: **20-Dec-2020 15:19**
Client ID: **18CPTMW04SW_120920** Run ID: **VOA6_375029** SeqNo: **5890042** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	37.47	2.0	40	0	93.7	64 - 133	37.84	0.991	20	
Carbon tetrachloride	21.22	1.0	20	0	106	72 - 136	21.07	0.729	20	
Chlorobenzene	18.7	1.0	20	0	93.5	82 - 118	18.7	0.0311	20	
Chloroethane	16.28	1.0	20	0	81.4	60 - 138	16.33	0.317	20	
Chloroform	18.01	1.0	20	0	90.1	79 - 124	17.93	0.473	20	
Chloromethane	13.09	1.0	20	0	65.4	50 - 139	12.59	3.86	20	
cis-1,2-Dichloroethene	18.37	1.0	20	0	91.9	78 - 123	17.76	3.39	20	
cis-1,3-Dichloropropene	19.18	1.0	20	0	95.9	75 - 124	18.4	4.15	20	
Dibromochloromethane	18.9	1.0	20	0	94.5	74 - 126	18.57	1.8	20	
Dibromomethane	19.03	1.0	20	0	95.1	79 - 123	18.18	4.54	20	
Dichlorodifluoromethane	15.91	1.0	20	0	79.5	32 - 152	15.56	2.24	20	
Ethylbenzene	20.89	1.0	20	0	104	79 - 121	20.8	0.455	20	
Hexachlorobutadiene	23.15	1.0	20	0	116	66 - 134	23.13	0.0888	20	
Isopropylbenzene	20.36	1.0	20	0	102	72 - 131	20.13	1.15	20	
m,p-Xylene	38.93	2.0	40	0	97.3	80 - 121	39.2	0.689	20	
Methylene chloride	17.3	2.0	20	0	86.5	74 - 124	17.04	1.49	20	
Naphthalene	20.45	1.0	20	0	102	61 - 128	16.87	19.2	20	
n-Butylbenzene	21.55	1.0	20	0	108	75 - 128	21.31	1.15	20	
n-Propylbenzene	21.55	1.0	20	0	108	76 - 126	20.87	3.21	20	
o-Xylene	18.95	1.0	20	0	94.7	78 - 122	19.03	0.422	20	
sec-Butylbenzene	21.34	1.0	20	0	107	77 - 126	20.73	2.94	20	
Styrene	18.92	1.0	20	0	94.6	78 - 123	18.47	2.45	20	
tert-Butylbenzene	21.04	1.0	20	0	105	78 - 124	20.33	3.47	20	
Tetrachloroethene	21.71	1.0	20	0	109	74 - 129	21.71	0.0281	20	
Toluene	20.37	1.0	20	0	102	80 - 121	20.01	1.78	20	
trans-1,2-Dichloroethene	18.43	1.0	20	0	92.1	75 - 124	18.39	0.217	20	
trans-1,3-Dichloropropene	18.79	1.0	20	0	93.9	73 - 127	18.43	1.91	20	
Trichloroethene	19.22	1.0	20	0	96.1	79 - 123	19.01	1.08	20	
Trichlorofluoromethane	17.04	1.0	20	0	85.2	65 - 141	17.67	3.59	20	
Vinyl chloride	16.96	1.0	20	0	84.8	58 - 137	17	0.2	20	
Surr: 1,2-Dichloroethane-d4	*45.19*	*1.0*	*50*	*0*	*90.4*	*81 - 118*	*44.64*	*1.21*	*20*	
Surr: 4-Bromofluorobenzene	*49.79*	*1.0*	*50*	*0*	*99.6*	*85 - 114*	*49.78*	*0.00958*	*20*	
Surr: Dibromofluoromethane	*44.81*	*1.0*	*50*	*0*	*89.6*	*80 - 119*	*45.36*	*1.21*	*20*	
Surr: Toluene-d8	*51.97*	*1.0*	*50*	*0*	*104*	*89 - 112*	*51.44*	*1.04*	*20*	

ALS Houston, US Date: 29-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	LHAAP 18 24
WorkOrder:	HS20120556

QC BATCH REPORT

Batch ID:	**R375029 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch:	HS20120556-01	HS20120556-02	HS20120556-05	HS20120556-06
	HS20120556-07	HS20120556-08	HS20120556-09	

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: **HS20120556**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 29-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120556

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120556-01	18CPTMW04_120920	Login	12/10/2020 6:11:58 PM	JRM	Sub
HS20120556-01	18CPTMW04_120920	Login	12/10/2020 6:11:58 PM	JRM	EXT135
HS20120556-01	18CPTMW04_120920	Login	12/10/2020 6:11:58 PM	JRM	VOA047
HS20120556-02	18CPTMW04SW_120920	Login	12/10/2020 6:11:58 PM	JRM	MET010
HS20120556-02	18CPTMW04SW_120920	Login	12/10/2020 6:11:58 PM	JRM	Sub
HS20120556-02	18CPTMW04SW_120920	Login	12/10/2020 6:11:58 PM	JRM	EXT135
HS20120556-02	18CPTMW04SW_120920	Login	12/10/2020 6:11:58 PM	JRM	VOA047
HS20120556-03	AWD3_120920	Login	12/10/2020 6:11:58 PM	JRM	MET010
HS20120556-03	AWD3_120920	Login	12/10/2020 6:11:58 PM	JRM	Sub
HS20120556-03	AWD3_120920	Login	12/10/2020 6:11:58 PM	JRM	VOA047

ALS Houston, US Date: 29-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120556 **Date/Time Received:** **10-Dec-2020 12:55**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Jared R. Makan* (eSignature) 10-Dec-2020 20:15 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 11-Dec-2020 08:56 (Date/Time)

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.3°C/0.3°C UC/C-	IR25
Cooler(s)/Kit(s):	43639	
Date/Time sample(s) sent to storage:	12/10/2020 20:45	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate ENVIRONMENTAL ASSOCIATES, INCORPORATED

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

LIMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS	1, 4 - DIOXANE							Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
18CPTMW04_120920	09 DEC 2020	0725	-		N	WG	5	X	X		X										
18CPTMW04SW_120920	09 DEC 2020	0810	-		N	WG	6	X	X	X	X										
AWD3_120920	09 DEC 2020	0905	-		N	WG	5	X	X	X											
AWD3_120920_a	09 DEC 2020	0905			FD	WG	5	X	X	X											
MW10_120920	09 DEC 2020	1000			N	WG	5	X	X		X										
18CPTMW12SW_120920	09 DEC 2020	1050	-		N	WG	6	X	X	X	X										
18CPTMW12DW_120920	09 DEC 2020	1135	-		N	WG	6	X	X	X	X										
MW7_120920	09 DEC 2020	1225	-		N	WG	5	X	X		X										
TRIP BLANK	09 DEC 2020		-		TB	W	2	X													
			-																		
			-																		

Sample Analysis Requested (5) | Quality Assurance Samples (6)

HS20120556

Bhate Environmental Associates, Inc.
LHAAP 18 24

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. ~~Scott Beesinger~~	12/9/20	1430	1. JM PM	12-10-20	12:55
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.:

_____ Method of Shipment: _____

_____ Fed Ex _____ Airbill Number:

_____ Analytical Lab: ALS 10450 Stanciff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

45634 0.3C 1R 25 CFO

HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-B075073-RJ
RMA:

Dec/10/20
ND 456394

FedEx Express

FedEx
TRK# 0221 1891 8883 1341

THU - 10 DEC AA
PRIORITY OVERNIGHT

77099

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 12/9 Time: 1430
Name: [illegible]
Company: [illegible]

Seal Broken By:
Date:

December 23, 2020 Service Request No:E2001217

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120556

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 10, 2020
For your reference, these analyses have been assigned our service request number **E2001217.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001217
Project:	HS20120556	**Date Received:**	12/10/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Eight samples were received for analysis at ALS Environmental in Houston on 12/10/20. The samples were received in good condition and are consistent with the accompanying chain of custody form.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000677: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS/DLCS RPD exceeded QC limits; the individual recoveries met acceptance criteria.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001217
Project: HS20120556

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001217-001	18CPTMW04_120920	12/9/2020	0725
E2001217-002	18CPTMW04SW_120920	12/9/2020	0810
E2001217-003	AWD3_120920	12/9/2020	0905
E2001217-004	AWD3_120920_a	12/9/2020	0905
E2001217-005	MW10_120920	12/9/2020	1000
E2001217-006	18CPTMW12SW_120920	12/9/2020	1050
E2001217-007	18CPTMW12DW_120920	12/9/2020	1135
E2001217-008	MW7_120920	12/9/2020	1225

Service Request Summary

Folder #: **E2001217**
Client Name: ALS Environmental - US
Project Name: HS20120556
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/10/20
Internal Due Date: 12/24/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120556
EDD: No EDD Specified

8 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 7E
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001217-001	18CPTMW04_120920	Ground Water	12/09/20 0725	**IV**
E2001217-002	18CPTMW04SW_120920	Ground Water	12/09/20 0810	**IV**
E2001217-003	AWD3_120920	Ground Water	12/09/20 0905	**IV**
E2001217-004	AWD3_120920_a	Ground Water	12/09/20 0905	**IV**
E2001217-005	MW10_120920	Ground Water	12/09/20 1000	**IV**
E2001217-006	18CPTMW12SW_120920	Ground Water	12/09/20 1050	**IV**
E2001217-007	18CPTMW12DW_120920	Ground Water	12/09/20 1135	**IV**
E2001217-008	MW7_120920	Ground Water	12/09/20 1225	**IV**

Service Request Summary

Folder #:	**E2001217**
Client Name:	ALS Environmental - US
Project Name:	HS20120556
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	12/10/20
Internal Due Date:	12/24/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20120556
EDD:	No EDD Specified

8 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved

Location: EHRMS-WIC 7E

Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

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Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15319**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120556
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120556-01**	**18CPTMW04_120920**	**Groundwater**	**09 Dec 2020 07:25**
	SUB_Perch-6850			24 Dec 2020
2.	**HS20120556-02**	**18CPTMW04SW_120920**	**Groundwater**	**09 Dec 2020 08:10**
	SUB_Perch-6850			24 Dec 2020
3.	**HS20120556-03**	**AWD3_120920**	**Groundwater**	**09 Dec 2020 09:05**
	SUB_Perch-6850			24 Dec 2020
4.	**HS20120556-04**	**AWD3_120920_a**	**Groundwater**	**09 Dec 2020 09:05**
	SUB_Perch-6850			24 Dec 2020
5.	**HS20120556-05**	**MW10_1200920**	**Groundwater**	**09 Dec 2020 10:00**
	SUB_Perch-6850			24 Dec 2020
6.	**HS20120556-06**	**18CPTMW12SW_120920**	**Groundwater**	**09 Dec 2020 10:50**
	SUB_Perch-6850			24 Dec 2020
7.	**HS20120556-07**	**18CPTMW12DW_120920**	**Groundwater**	**09 Dec 2020 11:35**
	SUB_Perch-6850			24 Dec 2020
8.	**HS20120556-08**	**MW7_120920**	**Groundwater**	**09 Dec 2020 12:25**
	SUB_Perch-6850			24 Dec 2020

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15319**

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By:	J. Ammons	Date/Time:	
Received By:		Date/Time:	12/19/20 1900
Cooler ID(s):		Temperature(s):	

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR25

Date/Time Received: 12/10/20 Initials: CH Date/Time Logged in: 12/10/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/10/20	1400	CH	3.6	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001208-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2001209-001	LH18/24-SP650_120820_BIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001210-001	LH18/24-SP140_120820	.01	6850/ClO4 DOD			Water	10mL	
4	E2001211-001	MW5_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001211-002	18CPTMW08DW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001211-003	18CPTMW08SW_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001211-004	18CPTMW08SW_120820_a	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001211-005	MW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001211-006	MW16_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001211-007	18CPTMW23_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001211-008	18WW24_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001211-009	18CTPMW15_120820	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001217-001	18CPTMW04_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001217-002	18CPTMW04SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001217-003	AWD3_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001217-004	AWD3_120920_a	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001217-005	MW10_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001217-006	18CPTMW12SW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2001217-007	18CPTMW12DW_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
20	E2001217-008	MW7_120920	.01	6850/ClO4 DOD			Ground Water	10mL	
21	EQ2000677-01	MB		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000677-02	LCS		6850/ClO4 DOD			Liquid	10mL	
23	EQ2000677-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000677-02 1.00µL EQ2000677-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001208-001	100.00µL	E2001209-001	100.00µL	E2001210-001	100.00µL	E2001211-001	100.00µL	E2001211-002	100.00µL	E2001211-003	100.00µL
E2001211-004	100.00µL	E2001211-005	100.00µL	E2001211-006	100.00µL	E2001211-007	100.00µL	E2001211-008	100.00µL	E2001211-009	100.00µL
E2001217-001	100.00µL	E2001217-002	100.00µL	E2001217-003	100.00µL	E2001217-004	100.00µL	E2001217-005	100.00µL	E2001217-006	100.00µL
E2001217-007	100.00µL	E2001217-008	100.00µL	EQ2000677-01	100.00µL	EQ2000677-02	100.00µL	EQ2000677-03	100.00µL		

Preparation Information Benchsheet

Prep Run#: 371505 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/15/20 08:58

Preparation Steps

Step: Preparation
Started: 12/15/20 08:58
Finished: 12/15/20 11:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/15/20

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	12/ 9/20 0725
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CPTMW04_120920	**Units:**	µg/L
Lab Code:	E2001217-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**126**		1.00	0.500	0.250	10	12/15/20	12/21/20 11:50	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	12/ 9/20 0810
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CPTMW04SW_120920	**Units:**	µg/L
Lab Code:	E2001217-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.200	0.100	0.0500	2	12/15/20	12/22/20 15:31	371505	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	12/ 9/20 0905
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	AWD3_120920	**Units:**	µg/L
Lab Code:	E2001217-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**7.56**		0.100	0.0500	0.0250	1	12/15/20	12/21/20 12:06	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	12/ 9/20 0905
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	AWD3_120920_a	**Units:**	µg/L
Lab Code:	E2001217-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**6.33**		0.100	0.0500	0.0250	1	12/15/20	12/21/20 12:13	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	12/ 9/20 1000
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	MW10_120920	**Units:**	µg/L
Lab Code:	E2001217-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.200	0.100	0.0500	2	12/15/20	12/21/20 12:21	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	12/ 9/20 1050
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CPTMW12SW_120920	**Units:**	µg/L
Lab Code:	E2001217-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.151**	J	0.500	0.250	0.125	5	12/15/20	12/21/20 12:37	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	12/ 9/20 1135
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	18CPTMW12DW_120920	**Units:**	µg/L
Lab Code:	E2001217-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.156**	J	0.200	0.100	0.0500	2	12/15/20	12/21/20 12:45	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	12/ 9/20 1225
Sample Matrix:	Ground Water	**Date Received:**	12/10/20
Sample Name:	MW7_120920	**Units:**	µg/L
Lab Code:	E2001217-008	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**14000**		50.0	25.0	12.5	500	12/15/20	12/21/20 12:53	371505	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000677-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/15/20	12/22/20 17:46	371505	708075	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20120556
Sample Matrix: Ground Water

Service Request: E2001217
Date Analyzed: 12/22/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371505

	Lab Control Sample EQ2000677-02			Duplicate Lab Control Sample EQ2000677-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.104	0.100	104	0.0873	0.100	87	84 - 119	17 *	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.104**		0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:07	371505	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001217
Project:	HS20120556	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000677-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0873**	J	0.100	0.0500	0.0250	1	12/15/20	12/22/20 15:15	371505	708075	

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December 31, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120617**

Laboratory Results for: **LHAAP 18 24**

Dear Marcia Olive,

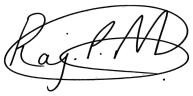
ALS Environmental received 11 sample(s) on Dec 11, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,



Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120617

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120617-01	18CPTMW03SW_121020	Groundwater		10-Dec-2020 07:25	11-Dec-2020 10:15	☐
HS20120617-02	MW2_121020	Groundwater		10-Dec-2020 08:15	11-Dec-2020 10:15	☐
HS20120617-03	18CPTMW01SW_121020	Groundwater		10-Dec-2020 09:00	11-Dec-2020 10:15	☐
HS20120617-04	18CPTMW22R_121020	Groundwater		10-Dec-2020 09:50	11-Dec-2020 10:15	☐
HS20120617-05	18CPTMW22SW_121020	Groundwater		10-Dec-2020 10:35	11-Dec-2020 10:15	☐
HS20120617-06	MW20-121020	Groundwater		10-Dec-2020 11:20	11-Dec-2020 10:15	☐
HS20120617-07	MW20_121020_a	Groundwater		10-Dec-2020 11:20	11-Dec-2020 10:15	☐
HS20120617-08	MW19_121020	Groundwater		10-Dec-2020 12:05	11-Dec-2020 10:15	☐
HS20120617-09	18CPTMW19_121020	Groundwater		10-Dec-2020 12:50	11-Dec-2020 10:15	☐
HS20120617-10	18WW17_121020	Groundwater		10-Dec-2020 13:05	11-Dec-2020 10:15	☐
HS20120617-11	Trip Blank	Water	VBLKW-112420-40	10-Dec-2020 00:00	11-Dec-2020 10:15	☐

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: LHAAP 18 24
Work Order: HS20120617

Work Order Comments

• The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160783

Sample ID: LCS-160783

• High %R for surrogates 4-Terphenyl-d14 and 2-Fluorobiphenyl, they are not associate with target compound.

Sample ID: LCSD-160783

• High %R for surrogate 4-Terphenyl-d14 , it is not associate with target compound.

GCMS Volatiles by Method SW8260

Batch ID: R375144

Sample ID: 18CPTMW01SW_121020 (HS20120617-03)

• Lowest practical dilution for sample hs20120617-03 due to high concentration of non-target compound.

Sample ID: CCV

• Acetone, 2-Butanone, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene exceeded %D limits for CCV. Samples are ND for these compounds.

Batch ID: R375029

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 161130

Sample ID: 18WW17_121020 (HS20120617-10)

• Sample reported at 2x due to high concentration of Sodium.

Sample ID: MW19_121020 (HS20120617-08)

• Sample reported at 2x due to high concentration of Sodium.

Sample ID: MW2_121020 (HS20120617-02MS)

• Nickel and Silver failed for MS but passed for MSD and PDS.

• The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. Barium,Calcium,Cobalt,Iron,Manganese,Magnesium,Sodium)

Sample ID: MW2_121020 (HS20120617-02PDS)

• The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium, Iron, Magnesium

Metals by Method SW7470

Batch ID: 160940

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120617

CASE NARRATIVE

Metals by Method SW7470

Batch ID: 160940

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW03SW_121020
Collection Date: Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:46
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:46
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:46
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:46
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:46
1,2-Dichloroethane	**0.86**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 17:46
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:46
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:46
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:46
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 17:46
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 17:46
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:46
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:46
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 17:46
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 17:46
Benzene	**0.82**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 17:46
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:46
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 17:46
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW03SW_121020
Collection Date: Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
cis-1,2-Dichloroethene	**4.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 17:46
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 17:46
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 17:46
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 17:46
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:46
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:46
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:46
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:46
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:46
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
trans-1,2-Dichloroethene	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 17:46
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Trichloroethene	**31**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 17:46
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:46
Surr: 1,2-Dichloroethane-d4	*91.1*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 17:46*
Surr: 4-Bromofluorobenzene	*94.4*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 17:46*
Surr: Dibromofluoromethane	*90.7*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 17:46*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 17:46*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.059**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 14:41
Surr: 2-Fluorobiphenyl	*67.7*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 14:41*
Surr: 4-Terphenyl-d14	*87.6*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 14:41*
Surr: Nitrobenzene-d5	*62.4*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 14:41*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW03SW_121020
Collection Date: Dec-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 28-Dec-2020		Analyst: JHD
Aluminum	**0.0721**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	30-Dec-2020 14:28
Antimony	**0.000526**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Arsenic	**0.00491**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Barium	**0.669**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:28
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:28
Calcium	**169**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	30-Dec-2020 14:28
Chromium	**0.0201**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Cobalt	**0.00317**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Copper	**0.00141**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Iron	**6.57**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:28
Lead	**0.00137**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Magnesium	**20.0**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:28
Manganese	**0.665**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Nickel	**0.00517**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
Potassium	**109**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:28
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	30-Dec-2020 14:28
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	30-Dec-2020 14:28
Sodium	**268**		**0.140**	**0.500**	**2.00**	**mg/L**	10	30-Dec-2020 15:24
Thallium	**0.000273**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	30-Dec-2020 14:28
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	30-Dec-2020 14:28
Zinc	**0.0186**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:28
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:01
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW2_121020
Collection Date: 10-Dec-2020 08:15

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
1,1,1-Trichloroethane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
1,1,2,2-Tetrachloroethane	50	U	50	50	100	ug/L	100	20-Dec-2020 20:56
1,1,2-Trichloroethane	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
1,1-Dichloroethane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
1,1-Dichloroethene	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
1,1-Dichloropropene	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
1,2,3-Trichlorobenzene	100	U	40	100	100	ug/L	100	20-Dec-2020 20:56
1,2,3-Trichloropropane	100	U	50	100	100	ug/L	100	20-Dec-2020 20:56
1,2,4-Trichlorobenzene	100	U	50	100	100	ug/L	100	20-Dec-2020 20:56
1,2,4-Trimethylbenzene	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
1,2-Dibromo-3-chloropropane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
1,2-Dibromoethane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
1,2-Dichlorobenzene	100	U	50	100	100	ug/L	100	20-Dec-2020 20:56
1,2-Dichloroethane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
1,2-Dichloropropane	50	U	50	50	100	ug/L	100	20-Dec-2020 20:56
1,3,5-Trimethylbenzene	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
1,3-Dichlorobenzene	100	U	40	100	100	ug/L	100	20-Dec-2020 20:56
1,3-Dichloropropane	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
1,4-Dichlorobenzene	100	U	40	100	100	ug/L	100	20-Dec-2020 20:56
2,2-Dichloropropane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
2-Butanone	100	U	50	100	200	ug/L	100	20-Dec-2020 20:56
2-Chlorotoluene	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
2-Hexanone	200	U	100	200	200	ug/L	100	20-Dec-2020 20:56
4-Chlorotoluene	100	U	40	100	100	ug/L	100	20-Dec-2020 20:56
4-Isopropyltoluene	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
4-Methyl-2-pentanone	200	U	70	200	200	ug/L	100	20-Dec-2020 20:56
Acetone	100	U	40	100	200	ug/L	100	20-Dec-2020 20:56
Benzene	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
Bromobenzene	100	U	40	100	100	ug/L	100	20-Dec-2020 20:56
Bromochloromethane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
Bromodichloromethane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
Bromoform	50	U	40	50	100	ug/L	100	20-Dec-2020 20:56
Bromomethane	50	U	40	50	100	ug/L	100	20-Dec-2020 20:56
Carbon disulfide	100	U	60	100	200	ug/L	100	20-Dec-2020 20:56
Carbon tetrachloride	50	U	50	50	100	ug/L	100	20-Dec-2020 20:56
Chlorobenzene	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
Chloroethane	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
Chloroform	**62**	J	**20**	**50**	**100**	**ug/L**	100	20-Dec-2020 20:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW2_121020
Collection Date: 10-Dec-2020 08:15

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
cis-1,2-Dichloroethene	**40,000**		**100**	**250**	**500**	**ug/L**	500	21-Dec-2020 16:25
cis-1,3-Dichloropropene	50	U	10	50	100	ug/L	100	20-Dec-2020 20:56
Dibromochloromethane	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
Dibromomethane	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
Dichlorodifluoromethane	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
Ethylbenzene	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
Hexachlorobutadiene	100	U	100	100	100	ug/L	100	20-Dec-2020 20:56
Isopropylbenzene	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
m,p-Xylene	100	U	50	100	200	ug/L	100	20-Dec-2020 20:56
Methylene chloride	**13,000**		**40**	**100**	**200**	**ug/L**	100	20-Dec-2020 20:56
n-Butylbenzene	100	U	40	100	100	ug/L	100	20-Dec-2020 20:56
n-Propylbenzene	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
Naphthalene	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
o-Xylene	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
sec-Butylbenzene	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
Styrene	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
tert-Butylbenzene	100	U	30	100	100	ug/L	100	20-Dec-2020 20:56
Tetrachloroethene	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
Toluene	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
trans-1,2-Dichloroethene	**120**		**20**	**50**	**100**	**ug/L**	100	20-Dec-2020 20:56
trans-1,3-Dichloropropene	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
Trichloroethene	**6,900**		**20**	**50**	**100**	**ug/L**	100	20-Dec-2020 20:56
Trichlorofluoromethane	50	U	30	50	100	ug/L	100	20-Dec-2020 20:56
Vinyl chloride	50	U	20	50	100	ug/L	100	20-Dec-2020 20:56
Surr: 1,2-Dichloroethane-d4	*93.7*			**0**	*81-118*	*%REC*	*100*	*20-Dec-2020 20:56*
Surr: 1,2-Dichloroethane-d4	*92.2*			**0**	*81-118*	*%REC*	*500*	*21-Dec-2020 16:25*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*100*	*20-Dec-2020 20:56*
Surr: 4-Bromofluorobenzene	*93.1*			**0**	*85-114*	*%REC*	*500*	*21-Dec-2020 16:25*
Surr: Dibromofluoromethane	*91.7*			**0**	*80-119*	*%REC*	*100*	*20-Dec-2020 20:56*
Surr: Dibromofluoromethane	*89.3*			**0**	*80-119*	*%REC*	*500*	*21-Dec-2020 16:25*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*100*	*20-Dec-2020 20:56*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*500*	*21-Dec-2020 16:25*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.49**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 14:59
Surr: 2-Fluorobiphenyl	*70.2*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 14:59*
Surr: 4-Terphenyl-d14	*79.9*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 14:59*
Surr: Nitrobenzene-d5	*89.0*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 14:59*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW2_121020
Collection Date: 10-Dec-2020 08:15

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 28-Dec-2020		Analyst: JHD
Aluminum	**0.0390**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	30-Dec-2020 14:30
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	30-Dec-2020 14:30
Arsenic	**0.0392**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:30
Barium	**0.389**		**0.0190**	**0.0250**	**0.0500**	**mg/L**	10	30-Dec-2020 15:26
Beryllium	**0.000568**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	30-Dec-2020 14:30
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:30
Calcium	**90.4**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	30-Dec-2020 14:30
Chromium	**0.0198**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:30
Cobalt	**0.210**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	30-Dec-2020 14:30
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	30-Dec-2020 14:30
Iron	**48.1**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:30
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	30-Dec-2020 14:30
Magnesium	**69.4**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:30
Manganese	**1.46**		**0.00700**	**0.0250**	**0.0500**	**mg/L**	10	30-Dec-2020 15:26
Nickel	**0.0715**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:30
Potassium	**3.17**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:30
Selenium	**0.00176**	J	**0.00110**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:30
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	30-Dec-2020 14:30
Sodium	**26.8**		**0.140**	**0.500**	**2.00**	**mg/L**	10	30-Dec-2020 15:26
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:30
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	30-Dec-2020 14:30
Zinc	**0.0831**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:30
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:16
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW01SW_121020
Collection Date: 10-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
1,1,1-Trichloroethane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
1,1,2,2-Tetrachloroethane	25	U	25	25	50	ug/L	50	21-Dec-2020 17:07
1,1,2-Trichloroethane	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
1,1-Dichloroethane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
1,1-Dichloroethene	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
1,1-Dichloropropene	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
1,2,3-Trichlorobenzene	50	U	20	50	50	ug/L	50	21-Dec-2020 17:07
1,2,3-Trichloropropane	50	U	25	50	50	ug/L	50	21-Dec-2020 17:07
1,2,4-Trichlorobenzene	50	U	25	50	50	ug/L	50	21-Dec-2020 17:07
1,2,4-Trimethylbenzene	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
1,2-Dibromo-3-chloropropane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
1,2-Dibromoethane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
1,2-Dichlorobenzene	50	U	25	50	50	ug/L	50	21-Dec-2020 17:07
1,2-Dichloroethane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
1,2-Dichloropropane	25	U	25	25	50	ug/L	50	21-Dec-2020 17:07
1,3,5-Trimethylbenzene	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
1,3-Dichlorobenzene	50	U	20	50	50	ug/L	50	21-Dec-2020 17:07
1,3-Dichloropropane	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
1,4-Dichlorobenzene	50	U	20	50	50	ug/L	50	21-Dec-2020 17:07
2,2-Dichloropropane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
2-Butanone	50	U	25	50	100	ug/L	50	21-Dec-2020 17:07
2-Chlorotoluene	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
2-Hexanone	100	U	50	100	100	ug/L	50	21-Dec-2020 17:07
4-Chlorotoluene	50	U	20	50	50	ug/L	50	21-Dec-2020 17:07
4-Isopropyltoluene	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
4-Methyl-2-pentanone	100	U	35	100	100	ug/L	50	21-Dec-2020 17:07
Acetone	50	U	20	50	100	ug/L	50	21-Dec-2020 17:07
Benzene	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
Bromobenzene	50	U	20	50	50	ug/L	50	21-Dec-2020 17:07
Bromochloromethane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
Bromodichloromethane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
Bromoform	25	U	20	25	50	ug/L	50	21-Dec-2020 17:07
Bromomethane	25	U	20	25	50	ug/L	50	21-Dec-2020 17:07
Carbon disulfide	50	U	30	50	100	ug/L	50	21-Dec-2020 17:07
Carbon tetrachloride	25	U	25	25	50	ug/L	50	21-Dec-2020 17:07
Chlorobenzene	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
Chloroethane	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
Chloroform	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW01SW_121020
Collection Date: 10-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
cis-1,2-Dichloroethene	**63**		**10**	**25**	**50**	**ug/L**	50	21-Dec-2020 17:07
cis-1,3-Dichloropropene	25	U	5.0	25	50	ug/L	50	21-Dec-2020 17:07
Dibromochloromethane	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
Dibromomethane	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
Dichlorodifluoromethane	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
Ethylbenzene	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
Hexachlorobutadiene	50	U	50	50	50	ug/L	50	21-Dec-2020 17:07
Isopropylbenzene	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
m,p-Xylene	50	U	25	50	100	ug/L	50	21-Dec-2020 17:07
Methylene chloride	50	U	20	50	100	ug/L	50	21-Dec-2020 17:07
n-Butylbenzene	50	U	20	50	50	ug/L	50	21-Dec-2020 17:07
n-Propylbenzene	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
Naphthalene	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
o-Xylene	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
sec-Butylbenzene	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
Styrene	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
tert-Butylbenzene	50	U	15	50	50	ug/L	50	21-Dec-2020 17:07
Tetrachloroethene	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
Toluene	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
trans-1,2-Dichloroethene	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
trans-1,3-Dichloropropene	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
Trichloroethene	**42**	J	**10**	**25**	**50**	**ug/L**	50	21-Dec-2020 17:07
Trichlorofluoromethane	25	U	15	25	50	ug/L	50	21-Dec-2020 17:07
Vinyl chloride	25	U	10	25	50	ug/L	50	21-Dec-2020 17:07
Surr: 1,2-Dichloroethane-d4	*90.5*			**0**	*81-118*	*%REC*	*50*	*21-Dec-2020 17:07*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*50*	*21-Dec-2020 17:07*
Surr: Dibromofluoromethane	*88.2*			**0**	*80-119*	*%REC*	*50*	*21-Dec-2020 17:07*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*50*	*21-Dec-2020 17:07*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 15:17
Surr: 2-Fluorobiphenyl	*74.3*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:17*
Surr: 4-Terphenyl-d14	*74.6*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:17*
Surr: Nitrobenzene-d5	*77.1*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:17*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW01SW_121020
Collection Date: 10-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 28-Dec-2020		Analyst: JHD
Aluminum	**0.0220**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	30-Dec-2020 14:49
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	30-Dec-2020 14:49
Arsenic	**0.00969**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:49
Barium	**0.990**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:49
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:49
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:49
Calcium	**30.5**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	30-Dec-2020 14:49
Chromium	**0.00561**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:49
Cobalt	**0.000225**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	30-Dec-2020 14:49
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	30-Dec-2020 14:49
Iron	**50.0**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:49
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	30-Dec-2020 14:49
Magnesium	**19.6**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:49
Manganese	**0.537**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:49
Nickel	**0.00128**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:49
Potassium	**11.5**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:49
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	30-Dec-2020 14:49
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	30-Dec-2020 14:49
Sodium	**96.5**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:49
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:49
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	30-Dec-2020 14:49
Zinc	**0.00399**	J	**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:49
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:18
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW22R_121020
Collection Date: 10-Dec-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:07
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:07
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:07
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:07
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:07
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:07
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:07
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:07
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 18:07
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 18:07
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:07
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 18:07
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 18:07
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:07
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 18:07
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:07
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW22R_121020
Collection Date: 10-Dec-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:07
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:07
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 18:07
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 18:07
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 18:07
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:07
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:07
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:07
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:07
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:07
Surr: 1,2-Dichloroethane-d4	*89.6*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 18:07*
Surr: 4-Bromofluorobenzene	*96.9*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 18:07*
Surr: Dibromofluoromethane	*89.1*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 18:07*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 18:07*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 15:35
Surr: 2-Fluorobiphenyl	*75.5*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:35*
Surr: 4-Terphenyl-d14	*74.8*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:35*
Surr: Nitrobenzene-d5	*68.0*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:35*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW22R_121020
Collection Date: 10-Dec-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 28-Dec-2020		Analyst: JHD
Aluminum	**1.51**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	30-Dec-2020 14:51
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	30-Dec-2020 14:51
Arsenic	**0.000926**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Barium	**0.0459**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Beryllium	**0.000302**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	30-Dec-2020 14:51
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:51
Calcium	**0.571**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	30-Dec-2020 14:51
Chromium	**0.00126**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Cobalt	**0.00618**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Copper	**0.00156**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Iron	**1.36**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:51
Lead	**0.000753**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Magnesium	**0.592**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:51
Manganese	**0.0475**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Nickel	**0.00213**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Potassium	**0.214**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:51
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	30-Dec-2020 14:51
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	30-Dec-2020 14:51
Sodium	**24.5**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:51
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:51
Vanadium	**0.00223**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
Zinc	**0.00651**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:51
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	**0.0000310**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	22-Dec-2020 16:20
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW22SW_121020
Collection Date: 10-Dec-2020 10:35

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:28
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:28
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:28
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:28
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:28
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:28
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 18:28
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 18:28
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:28
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 18:28
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 18:28
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:28
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 18:28
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW22SW_121020
Collection Date: 10-Dec-2020 10:35

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 18:28
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 18:28
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 18:28
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:28
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:28
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Trichloroethene	**0.58**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 18:28
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:28
Surr: 1,2-Dichloroethane-d4	*90.3*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 18:28*
Surr: 4-Bromofluorobenzene	*90.9*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 18:28*
Surr: Dibromofluoromethane	*90.5*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 18:28*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 18:28*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.066**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 15:53
Surr: 2-Fluorobiphenyl	*77.2*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:53*
Surr: 4-Terphenyl-d14	*78.4*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:53*
Surr: Nitrobenzene-d5	*73.2*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 15:53*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW22SW_121020
Collection Date: 10-Dec-2020 10:35

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 28-Dec-2020		Analyst: JHD
Aluminum	**0.207**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	30-Dec-2020 14:53
Antimony	**0.000423**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:53
Arsenic	**0.00249**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:53
Barium	**0.134**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:53
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:53
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:53
Calcium	**17.0**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	30-Dec-2020 14:53
Chromium	**0.0232**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:53
Cobalt	0.000500	U	0.000100	0.000500	0.00500	mg/L	1	30-Dec-2020 14:53
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	30-Dec-2020 14:53
Iron	**0.0460**	J	**0.0120**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:53
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	30-Dec-2020 14:53
Magnesium	**0.346**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	30-Dec-2020 14:53
Manganese	**0.00557**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:53
Nickel	**0.00110**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:53
Potassium	**335**		**0.180**	**0.500**	**2.00**	**mg/L**	10	30-Dec-2020 15:32
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	30-Dec-2020 14:53
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	30-Dec-2020 14:53
Sodium	**330**		**0.140**	**0.500**	**2.00**	**mg/L**	10	30-Dec-2020 15:32
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	30-Dec-2020 14:53
Vanadium	**0.000656**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	30-Dec-2020 14:53
Zinc	**0.00263**	J	**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	30-Dec-2020 14:53
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:21
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW20-121020
Collection Date: 10-Dec-2020 11:20

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:49
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:49
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:49
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 18:49
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:49
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:49
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 18:49
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 18:49
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:49
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 18:49
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 18:49
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:49
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 18:49
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW20-121020
Collection Date: 10-Dec-2020 11:20

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 18:49
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 18:49
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 18:49
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 18:49
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 18:49
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 18:49
Surr: 1,2-Dichloroethane-d4	*90.6*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 18:49*
Surr: 4-Bromofluorobenzene	*94.0*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 18:49*
Surr: Dibromofluoromethane	*90.3*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 18:49*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 18:49*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW20_121020_a
Collection Date: 10-Dec-2020 11:20

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:10
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:10
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:10
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:10
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:10
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:10
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 19:10
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 19:10
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:10
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 19:10
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 19:10
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:10
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 19:10
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW20_121020_a
Collection Date: 10-Dec-2020 11:20

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 19:10
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 19:10
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 19:10
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:10
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:10
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:10
Surr: 1,2-Dichloroethane-d4	*90.9*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 19:10*
Surr: 4-Bromofluorobenzene	*94.4*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 19:10*
Surr: Dibromofluoromethane	*90.7*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 19:10*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 19:10*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW19_121020
Collection Date: 10-Dec-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:31
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:31
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:31
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:31
1,2-Dichloroethane	**0.75**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 19:31
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:31
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 19:31
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 19:31
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:31
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 19:31
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 19:31
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 19:31
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW19_121020
Collection Date: 10-Dec-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
cis-1,2-Dichloroethene	**5.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 19:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 19:31
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 19:31
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 19:31
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:31
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:31
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Trichloroethene	**13**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 19:31
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:31
Surr: 1,2-Dichloroethane-d4	*88.3*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 19:31*
Surr: 4-Bromofluorobenzene	*92.1*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 19:31*
Surr: Dibromofluoromethane	*88.6*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 19:31*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 19:31*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW19_121020
Collection Date: 10-Dec-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 28-Dec-2020		Analyst: JHD
Aluminum	**1.34**		**0.00360**	**0.0100**	**0.0200**	**mg/L**	2	30-Dec-2020 15:34
Antimony	**0.00172**	J	**0.000800**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Arsenic	**0.00799**	J	**0.000800**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Barium	**0.498**		**0.00380**	**0.00500**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Beryllium	0.00100	U	0.000400	0.00100	0.00400	mg/L	2	30-Dec-2020 15:34
Cadmium	**0.00131**	J	**0.000400**	**0.00100**	**0.00400**	**mg/L**	2	30-Dec-2020 15:34
Calcium	**151**		**0.0680**	**0.100**	**1.00**	**mg/L**	2	30-Dec-2020 15:34
Chromium	**0.0967**		**0.000800**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Cobalt	**0.0316**		**0.000200**	**0.00100**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Copper	**0.00754**	J	**0.00200**	**0.00500**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Iron	**90.6**		**0.0240**	**0.100**	**0.400**	**mg/L**	2	30-Dec-2020 15:34
Lead	**0.00169**	J	**0.00120**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Magnesium	**95.1**		**0.0200**	**0.100**	**0.400**	**mg/L**	2	30-Dec-2020 15:34
Manganese	**4.19**		**0.00700**	**0.0250**	**0.0500**	**mg/L**	10	30-Dec-2020 15:36
Nickel	**0.0915**		**0.00120**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Potassium	**4.37**		**0.0360**	**0.100**	**0.400**	**mg/L**	2	30-Dec-2020 15:34
Selenium	0.00500	U	0.00220	0.00500	0.0100	mg/L	2	30-Dec-2020 15:34
Silver	0.00100	U	0.000400	0.00100	0.0100	mg/L	2	30-Dec-2020 15:34
Sodium	**1,050**		**0.140**	**0.500**	**2.00**	**mg/L**	10	30-Dec-2020 15:36
Thallium	0.00100	U	0.000400	0.00100	0.00400	mg/L	2	30-Dec-2020 15:34
Vanadium	**0.00173**	J	**0.00120**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
Zinc	**0.0175**		**0.00400**	**0.00500**	**0.0100**	**mg/L**	2	30-Dec-2020 15:34
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:23
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW19_121020
Collection Date: 10-Dec-2020 12:50

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:52
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:52
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:52
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:52
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:52
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 19:52
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:52
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:52
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:52
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 19:52
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:52
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 19:52
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:52
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:52
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 19:52
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 19:52
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:52
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 19:52
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW19_121020
Collection Date: 10-Dec-2020 12:50

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 19:52
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 19:52
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 19:52
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 19:52
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:52
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:52
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 19:52
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 19:52
Surr: 1,2-Dichloroethane-d4	*90.2*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 19:52*
Surr: 4-Bromofluorobenzene	*93.3*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 19:52*
Surr: Dibromofluoromethane	*90.5*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 19:52*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 19:52*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 16:11
Surr: 2-Fluorobiphenyl	*73.7*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:11*
Surr: 4-Terphenyl-d14	*78.0*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:11*
Surr: Nitrobenzene-d5	*77.2*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:11*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW17_121020
Collection Date: 10-Dec-2020 13:05

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 20:14
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 20:14
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 20:14
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 20:14
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 20:14
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 20:14
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 20:14
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 20:14
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 20:14
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 20:14
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 20:14
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 20:14
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 20:14
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW17_121020
Collection Date: 10-Dec-2020 13:05

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
cis-1,2-Dichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 20:14
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 20:14
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 20:14
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 20:14
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 20:14
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Trichloroethene	**50**		**0.20**	**0.50**	**1.0**	**ug/L**	1	20-Dec-2020 20:14
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 20:14
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 20:14
Surr: 1,2-Dichloroethane-d4	*90.7*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 20:14*
Surr: 4-Bromofluorobenzene	*89.8*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 20:14*
Surr: Dibromofluoromethane	*89.7*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 20:14*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 20:14*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW17_121020
Collection Date: 10-Dec-2020 13:05

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 28-Dec-2020		Analyst: JHD
Aluminum	**0.0166**	J	**0.00360**	**0.0100**	**0.0200**	**mg/L**	2	30-Dec-2020 15:38
Antimony	0.00200	U	0.000800	0.00200	0.0100	mg/L	2	30-Dec-2020 15:38
Arsenic	0.00200	U	0.000800	0.00200	0.0100	mg/L	2	30-Dec-2020 15:38
Barium	**3.22**		**0.00380**	**0.00500**	**0.0100**	**mg/L**	2	30-Dec-2020 15:38
Beryllium	0.00100	U	0.000400	0.00100	0.00400	mg/L	2	30-Dec-2020 15:38
Cadmium	**0.000559**	J	**0.000400**	**0.00100**	**0.00400**	**mg/L**	2	30-Dec-2020 15:38
Calcium	**310**		**0.0680**	**0.100**	**1.00**	**mg/L**	2	30-Dec-2020 15:38
Chromium	**0.0310**		**0.000800**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:38
Cobalt	**0.0234**		**0.000200**	**0.00100**	**0.0100**	**mg/L**	2	30-Dec-2020 15:38
Copper	**0.487**		**0.00200**	**0.00500**	**0.0100**	**mg/L**	2	30-Dec-2020 15:38
Iron	**5.59**		**0.0240**	**0.100**	**0.400**	**mg/L**	2	30-Dec-2020 15:38
Lead	**0.00199**	J	**0.00120**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:38
Magnesium	**214**		**0.0200**	**0.100**	**0.400**	**mg/L**	2	30-Dec-2020 15:38
Manganese	**0.568**		**0.00140**	**0.00500**	**0.0100**	**mg/L**	2	30-Dec-2020 15:38
Nickel	**1.25**		**0.00120**	**0.00200**	**0.0100**	**mg/L**	2	30-Dec-2020 15:38
Potassium	**1.35**		**0.0360**	**0.100**	**0.400**	**mg/L**	2	30-Dec-2020 15:38
Selenium	0.00500	U	0.00220	0.00500	0.0100	mg/L	2	30-Dec-2020 15:38
Silver	0.00100	U	0.000400	0.00100	0.0100	mg/L	2	30-Dec-2020 15:38
Sodium	**1,100**		**0.140**	**0.500**	**2.00**	**mg/L**	10	30-Dec-2020 15:40
Thallium	0.00100	U	0.000400	0.00100	0.00400	mg/L	2	30-Dec-2020 15:38
Vanadium	0.00200	U	0.00120	0.00200	0.0100	mg/L	2	30-Dec-2020 15:38
Zinc	**3.31**		**0.00400**	**0.00500**	**0.0100**	**mg/L**	2	30-Dec-2020 15:38
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	**0.000125**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	22-Dec-2020 16:25
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Dec-2020 16:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 10-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-11
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:25
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:25
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:25
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	20-Dec-2020 17:25
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:25
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:25
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 17:25
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	20-Dec-2020 17:25
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:25
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	20-Dec-2020 17:25
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 17:25
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:25
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	20-Dec-2020 17:25
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 10-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120617
Lab ID:HS20120617-11
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	20-Dec-2020 17:25
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	20-Dec-2020 17:25
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	20-Dec-2020 17:25
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	20-Dec-2020 17:25
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	20-Dec-2020 17:25
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	20-Dec-2020 17:25
Surr: 1,2-Dichloroethane-d4	*88.9*			**0**	*81-118*	*%REC*	*1*	*20-Dec-2020 17:25*
Surr: 4-Bromofluorobenzene	*93.6*			**0**	*85-114*	*%REC*	*1*	*20-Dec-2020 17:25*
Surr: Dibromofluoromethane	*90.0*			**0**	*80-119*	*%REC*	*1*	*20-Dec-2020 17:25*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*20-Dec-2020 17:25*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

Batch ID: 160783 **Start Date:** 17 Dec 2020 07:00 **End Date:** 17 Dec 2020 14:00
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120617-01	1	1000 (mL)	1 (mL)	0.001
HS20120617-02	1	1000 (mL)	1 (mL)	0.001
HS20120617-03	1	1000 (mL)	1 (mL)	0.001
HS20120617-04	1	1000 (mL)	1 (mL)	0.001
HS20120617-05	1	1000 (mL)	1 (mL)	0.001
HS20120617-09	1	1000 (mL)	1 (mL)	0.001

Batch ID: 160940 **Start Date:** 22 Dec 2020 09:00 **End Date:** 22 Dec 2020 11:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120617-01		10 (mL)	10 (mL)	1
HS20120617-02		10 (mL)	10 (mL)	1
HS20120617-03		10 (mL)	10 (mL)	1
HS20120617-04		10 (mL)	10 (mL)	1
HS20120617-05		10 (mL)	10 (mL)	1
HS20120617-08		10 (mL)	10 (mL)	1
HS20120617-10		10 (mL)	10 (mL)	1

Batch ID: 161130 **Start Date:** 28 Dec 2020 12:00 **End Date:** 28 Dec 2020 16:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120617-01		10 (mL)	10 (mL)	1
HS20120617-02		10 (mL)	10 (mL)	1
HS20120617-03		10 (mL)	10 (mL)	1
HS20120617-04		10 (mL)	10 (mL)	1
HS20120617-05		10 (mL)	10 (mL)	1
HS20120617-08		10 (mL)	10 (mL)	1
HS20120617-10		10 (mL)	10 (mL)	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160783 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Groundwater	
HS20120617-01	18CPTMW03SW_121020	10 Dec 2020 07:25		17 Dec 2020 08:37	29 Dec 2020 14:41	1
HS20120617-02	MW2_121020	10 Dec 2020 08:15		17 Dec 2020 08:37	29 Dec 2020 14:59	1
HS20120617-03	18CPTMW01SW_121020	10 Dec 2020 09:00		17 Dec 2020 08:37	29 Dec 2020 15:17	1
HS20120617-04	18CPTMW22R_121020	10 Dec 2020 09:50		17 Dec 2020 08:37	29 Dec 2020 15:35	1
HS20120617-05	18CPTMW22SW_121020	10 Dec 2020 10:35		17 Dec 2020 08:37	29 Dec 2020 15:53	1
HS20120617-09	18CPTMW19_121020	10 Dec 2020 12:50		17 Dec 2020 08:37	29 Dec 2020 16:11	1
Batch ID: 160940 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Groundwater	
HS20120617-01	18CPTMW03SW_121020	10 Dec 2020 07:25		22 Dec 2020 09:00	22 Dec 2020 16:01	1
HS20120617-02	MW2_121020	10 Dec 2020 08:15		22 Dec 2020 09:00	22 Dec 2020 16:16	1
HS20120617-03	18CPTMW01SW_121020	10 Dec 2020 09:00		22 Dec 2020 09:00	22 Dec 2020 16:18	1
HS20120617-04	18CPTMW22R_121020	10 Dec 2020 09:50		22 Dec 2020 09:00	22 Dec 2020 16:20	1
HS20120617-05	18CPTMW22SW_121020	10 Dec 2020 10:35		22 Dec 2020 09:00	22 Dec 2020 16:21	1
HS20120617-08	MW19_121020	10 Dec 2020 12:05		22 Dec 2020 09:00	22 Dec 2020 16:23	1
HS20120617-10	18WW17_121020	10 Dec 2020 13:05		22 Dec 2020 09:00	22 Dec 2020 16:25	1
Batch ID: 161130 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20120617-01	18CPTMW03SW_121020	10 Dec 2020 07:25		28 Dec 2020 16:00	30 Dec 2020 15:24	10
HS20120617-01	18CPTMW03SW_121020	10 Dec 2020 07:25		28 Dec 2020 16:00	30 Dec 2020 14:28	1
HS20120617-02	MW2_121020	10 Dec 2020 08:15		28 Dec 2020 16:00	30 Dec 2020 15:26	10
HS20120617-02	MW2_121020	10 Dec 2020 08:15		28 Dec 2020 16:00	30 Dec 2020 14:30	1
HS20120617-03	18CPTMW01SW_121020	10 Dec 2020 09:00		28 Dec 2020 16:00	30 Dec 2020 14:49	1
HS20120617-04	18CPTMW22R_121020	10 Dec 2020 09:50		28 Dec 2020 16:00	30 Dec 2020 14:51	1
HS20120617-05	18CPTMW22SW_121020	10 Dec 2020 10:35		28 Dec 2020 16:00	30 Dec 2020 15:32	10
HS20120617-05	18CPTMW22SW_121020	10 Dec 2020 10:35		28 Dec 2020 16:00	30 Dec 2020 14:53	1
HS20120617-08	MW19_121020	10 Dec 2020 12:05		28 Dec 2020 16:00	30 Dec 2020 15:36	10
HS20120617-08	MW19_121020	10 Dec 2020 12:05		28 Dec 2020 16:00	30 Dec 2020 15:34	2
HS20120617-10	18WW17_121020	10 Dec 2020 13:05		28 Dec 2020 16:00	30 Dec 2020 15:40	10
HS20120617-10	18WW17_121020	10 Dec 2020 13:05		28 Dec 2020 16:00	30 Dec 2020 15:38	2
Batch ID: R375029 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120617-11	Trip Blank	10 Dec 2020 00:00			20 Dec 2020 17:25	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375029 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120617-01	18CPTMW03SW_121020	10 Dec 2020 07:25			20 Dec 2020 17:46	1
HS20120617-02	MW2_121020	10 Dec 2020 08:15			20 Dec 2020 20:56	100
HS20120617-04	18CPTMW22R_121020	10 Dec 2020 09:50			20 Dec 2020 18:07	1
HS20120617-05	18CPTMW22SW_121020	10 Dec 2020 10:35			20 Dec 2020 18:28	1
HS20120617-06	MW20-121020	10 Dec 2020 11:20			20 Dec 2020 18:49	1
HS20120617-07	MW20_121020_a	10 Dec 2020 11:20			20 Dec 2020 19:10	1
HS20120617-08	MW19_121020	10 Dec 2020 12:05			20 Dec 2020 19:31	1
HS20120617-09	18CPTMW19_121020	10 Dec 2020 12:50			20 Dec 2020 19:52	1
HS20120617-10	18WW17_121020	10 Dec 2020 13:05			20 Dec 2020 20:14	1
Batch ID: R375144 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120617-02	MW2_121020	10 Dec 2020 08:15			21 Dec 2020 16:25	500
HS20120617-03	18CPTMW01SW_121020	10 Dec 2020 09:00			21 Dec 2020 17:07	50
Batch ID: R375271 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS20120617-01	18CPTMW03SW_121020	10 Dec 2020 07:25			23 Dec 2020 16:16	1
HS20120617-02	MW2_121020	10 Dec 2020 08:15			23 Dec 2020 16:16	1
HS20120617-03	18CPTMW01SW_121020	10 Dec 2020 09:00			23 Dec 2020 16:16	1
HS20120617-04	18CPTMW22R_121020	10 Dec 2020 09:50			23 Dec 2020 16:16	1
HS20120617-05	18CPTMW22SW_121020	10 Dec 2020 10:35			23 Dec 2020 16:16	1
HS20120617-06	MW20-121020	10 Dec 2020 11:20			23 Dec 2020 16:16	1
HS20120617-07	MW20_121020_a	10 Dec 2020 11:20			23 Dec 2020 16:16	1
HS20120617-08	MW19_121020	10 Dec 2020 12:05			23 Dec 2020 16:16	1
HS20120617-09	18CPTMW19_121020	10 Dec 2020 12:50			23 Dec 2020 16:16	1
HS20120617-10	18WW17_121020	10 Dec 2020 13:05			23 Dec 2020 16:16	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: 160940 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-160940** Units: **mg/L** Analysis Date: **22-Dec-2020 15:58**
Client ID: Run ID: **HG03_375156** SeqNo: **5893311** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-160940** Units: **mg/L** Analysis Date: **22-Dec-2020 16:00**
Client ID: Run ID: **HG03_375156** SeqNo: **5893312** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00488	0.000200	0.005	0	97.6	82 - 119				

MS Sample ID: **HS20120617-01MS** Units: **mg/L** Analysis Date: **22-Dec-2020 16:07**
Client ID: **18CPTMW03SW_121020** Run ID: **HG03_375156** SeqNo: **5893314** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00531	0.000200	0.005	0.000002000	106	82 - 119				

MSD Sample ID: **HS20120617-01MSD** Units: **mg/L** Analysis Date: **22-Dec-2020 16:15**
Client ID: **18CPTMW03SW_121020** Run ID: **HG03_375156** SeqNo: **5893477** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00534	0.000200	0.005	0	107	82 - 119	0.005310	0.563	20	

The following samples were analyzed in this batch:

HS20120617-01	HS20120617-02	HS20120617-03	HS20120617-04
HS20120617-05	HS20120617-08	HS20120617-10	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: 161130 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-161130** Units: **mg/L** Analysis Date: **30-Dec-2020 14:24**
Client ID: Run ID: **ICPMS05_375610** SeqNo: **5904902** PrepDate: **28-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.002868	0.0100								J
Antimony	0.00100	0.00500								U
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Copper	0.00250	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.01095	0.200								J
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.03912	0.200								J
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: 161130 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-161130** Units: **mg/L** Analysis Date: **30-Dec-2020 14:26**
Client ID: Run ID: **ICPMS05_375610** SeqNo: **5904903** PrepDate: **28-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1008	0.0100	0.1	0	101	84 - 117				
Antimony	0.04865	0.00500	0.05	0	97.3	85 - 117				
Arsenic	0.05276	0.00500	0.05	0	106	84 - 116				
Barium	0.04685	0.00500	0.05	0	93.7	86 - 114				
Beryllium	0.04785	0.00200	0.05	0	95.7	83 - 121				
Cadmium	0.05064	0.00200	0.05	0	101	87 - 115				
Calcium	4.926	0.500	5	0	98.5	87 - 118				
Chromium	0.04748	0.00500	0.05	0	95.0	85 - 116				
Cobalt	0.04769	0.00500	0.05	0	95.4	86 - 115				
Copper	0.04873	0.00500	0.05	0	97.5	85 - 118				
Iron	4.775	0.200	5	0	95.5	87 - 118				
Magnesium	4.825	0.200	5	0	96.5	83 - 118				
Manganese	0.04706	0.00500	0.05	0	94.1	87 - 115				
Nickel	0.0482	0.00500	0.05	0	96.4	85 - 117				
Potassium	4.923	0.200	5	0	98.5	87 - 115				
Selenium	0.05811	0.00500	0.05	0	116	80 - 120				
Silver	0.04637	0.00500	0.05	0	92.7	85 - 116				
Sodium	4.779	0.200	5	0	95.6	85 - 117				
Vanadium	0.04596	0.00500	0.05	0	91.9	86 - 115				
Zinc	0.05733	0.00500	0.05	0	115	83 - 119				

LCS Sample ID: **LCS-161130** Units: **mg/L** Analysis Date: **31-Dec-2020 13:57**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906915** PrepDate: **28-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.04689	0.00500	0.05	0	93.8	88 - 115				
Thallium	0.04895	0.00200	0.05	0	97.9	82 - 116				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: 161130 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20120617-02MS** Units: **mg/L** Analysis Date: **30-Dec-2020 14:34**
Client ID: **MW2_121020** Run ID: **ICPMS05_375610** SeqNo: **5904907** PrepDate: **28-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1325	0.0100	0.1	0.03902	93.5	84 - 117				
Antimony	0.04653	0.00500	0.05	0.000265	92.5	85 - 117				
Arsenic	0.09032	0.00500	0.05	0.03918	102	84 - 116				
Barium	4.146	0.00500	0.05	4.262	-231	86 - 114				SEO
Beryllium	0.04978	0.00200	0.05	0.000568	98.4	83 - 121				
Cadmium	0.04795	0.00200	0.05	0.000052	95.8	87 - 115				
Calcium	92.06	0.500	5	90.4	33.2	87 - 118				SO
Chromium	0.06573	0.00500	0.05	0.01975	92.0	85 - 116				
Cobalt	0.2511	0.00500	0.05	0.21	82.2	86 - 115				SO
Copper	0.04688	0.00500	0.05	0.000889	92.0	85 - 118				
Iron	50.23	0.200	5	48.09	42.8	87 - 118				SO
Lead	0.0455	0.00500	0.05	0.000144	90.7	88 - 115				
Magnesium	70.07	0.200	5	69.43	12.9	83 - 118				SO
Manganese	14.41	0.00500	0.05	14.99	-1160	87 - 115				SEO
Nickel	0.1124	0.00500	0.05	0.07151	81.9	85 - 117				S
Potassium	7.89	0.200	5	3.171	94.4	87 - 115				
Selenium	0.05304	0.00500	0.05	0.001761	103	80 - 120				
Silver	0.0421	0.00500	0.05	0.000013	84.2	85 - 116				S
Sodium	250.8	0.200	5	263.6	-258	85 - 117				SEO
Thallium	0.04256	0.00200	0.05	0.000024	85.1	82 - 116				
Vanadium	0.04776	0.00500	0.05	0.000198	95.1	86 - 115				
Zinc	0.1284	0.00500	0.05	0.08311	90.6	83 - 119				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: 161130 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20120617-02MSD** Units: **mg/L** Analysis Date: **30-Dec-2020 14:36**
Client ID: **MW2_121020** Run ID: **ICPMS05_375610** SeqNo: **5904908** PrepDate: **28-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1411	0.0100	0.1	0.03902	102	84 - 117	0.1325	6.3	20	
Antimony	0.05013	0.00500	0.05	0.000265	99.7	85 - 117	0.04653	7.44	20	
Arsenic	0.09701	0.00500	0.05	0.03918	116	84 - 116	0.09032	7.14	20	
Barium	4.688	0.00500	0.05	4.262	852	86 - 114	4.146	12.3	20	SEO
Beryllium	0.053	0.00200	0.05	0.000568	105	83 - 121	0.04978	6.28	20	
Cadmium	0.04894	0.00200	0.05	0.000052	97.8	87 - 115	0.04795	2.05	20	
Calcium	101.7	0.500	5	90.4	227	87 - 118	92.06	10	20	SO
Chromium	0.07174	0.00500	0.05	0.01975	104	85 - 116	0.06573	8.74	20	
Cobalt	0.2724	0.00500	0.05	0.21	125	86 - 115	0.2511	8.12	20	SO
Copper	0.04911	0.00500	0.05	0.000889	96.5	85 - 118	0.04688	4.66	20	
Iron	56.36	0.200	5	48.09	165	87 - 118	50.23	11.5	20	SO
Lead	0.04825	0.00500	0.05	0.000144	96.2	88 - 115	0.0455	5.88	20	
Magnesium	77.94	0.200	5	69.43	170	83 - 118	70.07	10.6	20	SO
Manganese	15.94	0.00500	0.05	14.99	1900	87 - 115	14.41	10.1	20	SEO
Nickel	0.1271	0.00500	0.05	0.07151	111	85 - 117	0.1124	12.2	20	
Potassium	8.43	0.200	5	3.171	105	87 - 115	7.89	6.61	20	
Selenium	0.05729	0.00500	0.05	0.001761	111	80 - 120	0.05304	7.7	20	
Silver	0.04559	0.00500	0.05	0.000013	91.1	85 - 116	0.0421	7.95	20	
Sodium	280.9	0.200	5	263.6	345	85 - 117	250.8	11.3	20	SEO
Thallium	0.04474	0.00200	0.05	0.000024	89.4	82 - 116	0.04256	4.99	20	
Vanadium	0.05177	0.00500	0.05	0.000198	103	86 - 115	0.04776	8.06	20	
Zinc	0.1387	0.00500	0.05	0.08311	111	83 - 119	0.1284	7.69	20	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: 161130 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20120617-02PDS** Units: **mg/L** Analysis Date: **30-Dec-2020 14:37**
Client ID: **MW2_121020** Run ID: **ICPMS05_375610** SeqNo: **5904909** PrepDate: **28-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1492	0.0100	0.1	0.03902	110	80 - 120				
Antimony	0.1041	0.00500	0.1	0.000265	104	80 - 120				
Arsenic	0.1557	0.00500	0.1	0.03918	116	80 - 120				
Beryllium	0.1013	0.00200	0.1	0.000568	101	80 - 120				
Cadmium	0.1061	0.00200	0.1	0.000052	106	80 - 120				
Calcium	108.1	0.500	10	90.4	177	80 - 120				SO
Chromium	0.1271	0.00500	0.1	0.01975	107	80 - 120				
Copper	0.1009	0.00500	0.1	0.000889	100.0	80 - 120				
Iron	62.3	0.200	10	48.09	142	80 - 120				SO
Lead	0.1064	0.00500	0.1	0.000144	106	80 - 120				
Magnesium	86.23	0.200	10	69.43	168	80 - 120				SO
Nickel	0.1752	0.00500	0.1	0.07151	104	80 - 120				
Potassium	14.32	0.200	10	3.171	112	80 - 120				
Selenium	0.1182	0.00500	0.1	0.001761	116	80 - 120				
Silver	0.09632	0.00500	0.1	0.000013	96.3	80 - 120				
Thallium	0.105	0.00200	0.1	0.000024	105	80 - 120				
Vanadium	0.1076	0.00500	0.1	0.000198	107	80 - 120				
Zinc	0.1928	0.00500	0.1	0.08311	110	80 - 120				

PDS Sample ID: **HS20120617-02PDS** Units: **mg/L** Analysis Date: **30-Dec-2020 15:30**
Client ID: **MW2_121020** Run ID: **ICPMS05_375610** SeqNo: **5904927** PrepDate: **28-Dec-2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	1.35	0.0500	1	0.3889	96.1	80 - 120				
Manganese	2.384	0.0500	1	1.455	92.9	80 - 120				
Sodium	124.3	2.00	100	26.77	97.5	80 - 120				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: 161130 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20120617-02SD** Units: **mg/L** Analysis Date: **30-Dec-2020 14:32**
Client ID: **MW2_121020** Run ID: **ICPMS05_375610** SeqNo: **5904906** PrepDate: **28-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.05101	0.0500					0.03902	0	10	
Antimony	0.00500	0.0250					0.000265	0	10	U
Arsenic	0.03682	0.0250					0.03918	6.04	10	
Beryllium	0.00250	0.0100					0.000568	0	10	U
Cadmium	0.00250	0.0100					0.000052	0	10	U
Calcium	84.98	2.50					90.4	6	10	
Chromium	0.01974	0.0250					0.01975	0	10	J
Cobalt	0.1948	0.0250					0.21	7.24	10	
Copper	0.0125	0.0250					0.000889	0	10	U
Iron	49.15	1.00					48.09	2.21	10	
Lead	0.00500	0.0250					0.000144	0	10	U
Magnesium	68.27	1.00					69.43	1.66	10	
Nickel	0.07161	0.0250					0.07151	0.147	10	
Potassium	2.964	1.00					3.171	6.53	10	
Selenium	0.0125	0.0250					0.001761	0	10	U
Silver	0.00250	0.0250					0.000013	0	10	U
Thallium	0.00250	0.0100					0.000024	0	10	U
Vanadium	0.00500	0.0250					0.000198	0	10	U
Zinc	0.08521	0.0250					0.08311	2.54	10	

SD Sample ID: **HS20120617-02SD** Units: **mg/L** Analysis Date: **30-Dec-2020 15:28**
Client ID: **MW2_121020** Run ID: **ICPMS05_375610** SeqNo: **5904926** PrepDate: **28-Dec-2020** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.3858	0.250					0.3889	0.806	10	
Manganese	1.551	0.250					1.455	6.57	10	

SD Sample ID: **HS20120617-02SD** Units: **mg/L** Analysis Date: **31-Dec-2020 13:59**
Client ID: **MW2_121020** Run ID: **ICPMS04_375745** SeqNo: **5906916** PrepDate: **28-Dec-2020** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Sodium	27.77	10.0					26.77	3.74	10	

The following samples were analyzed in this batch:

HS20120617-01	HS20120617-02	HS20120617-03	HS20120617-04
HS20120617-05	HS20120617-08	HS20120617-10	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: 160783 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160783** Units: **ug/L** Analysis Date: **29-Dec-2020 11:55**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903676** PrepDate: **17-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.05437*	*0*	*0.08*	*0*	*68.0*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.09333*	*0*	*0.08*	*0*	*117*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.05598*	*0*	*0.08*	*0*	*70.0*	*40 - 140*				

LCS Sample ID: **LCS-160783** Units: **ug/L** Analysis Date: **29-Dec-2020 12:13**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903677** PrepDate: **17-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.07237	0.010	0.08	0	90.5	40 - 140				
Surr: 2-Fluorobiphenyl	*0.1128*	*0*	*0.08*	*0*	*141*	*40 - 140*				S
Surr: 4-Terphenyl-d14	*0.1397*	*0*	*0.08*	*0*	*175*	*40 - 140*				S
Surr: Nitrobenzene-d5	*0.09458*	*0*	*0.08*	*0*	*118*	*40 - 140*				

LCSD Sample ID: **LCSD-160783** Units: **ug/L** Analysis Date: **29-Dec-2020 12:31**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903678** PrepDate: **17-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.07525	0.010	0.08	0	94.1	40 - 140	0.07237	3.91	20	
Surr: 2-Fluorobiphenyl	*0.1118*	*0*	*0.08*	*0*	*140*	*40 - 140*	*0.1128*	*0.912*	*20*	
Surr: 4-Terphenyl-d14	*0.1422*	*0*	*0.08*	*0*	*178*	*40 - 140*	*0.1397*	*1.78*	*20*	S
Surr: Nitrobenzene-d5	*0.07128*	*0*	*0.08*	*0*	*89.1*	*40 - 140*	*0.09458*	*28.1*	*20*	R

The following samples were analyzed in this batch: HS20120617-01 HS20120617-02 HS20120617-03 HS20120617-04 HS20120617-05 HS20120617-09

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201220** Units: **ug/L** Analysis Date: **20-Dec-2020 13:12**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890036** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201220** Units: **ug/L** Analysis Date: **20-Dec-2020 13:12**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890036** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.09*	*1.0*	*50*	*0*	*90.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.74*	*1.0*	*50*	*0*	*95.5*	*85 - 114*				
Surr: Dibromofluoromethane	*45.03*	*1.0*	*50*	*0*	*90.1*	*80 - 119*				
Surr: Toluene-d8	*52.47*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201220** Units: **ug/L** Analysis Date: **20-Dec-2020 12:30**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890035** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.87	1.0	20	0	109	78 - 124				
1,1,1-Trichloroethane	20.52	1.0	20	0	103	74 - 131				
1,1,2,2-Tetrachloroethane	22.58	1.0	20	0	113	71 - 121				
1,1,2-Trichloroethane	22.4	1.0	20	0	112	80 - 119				
1,1-Dichloroethane	19.95	1.0	20	0	99.7	77 - 125				
1,1-Dichloroethene	17.75	1.0	20	0	88.7	71 - 131				
1,1-Dichloropropene	20.16	1.0	20	0	101	78 - 125				
1,2,3-Trichlorobenzene	23.98	1.0	20	0	120	69 - 129				
1,2,3-Trichloropropane	22.02	1.0	20	0	110	73 - 122				
1,2,4-Trichlorobenzene	23.64	1.0	20	0	118	69 - 130				
1,2,4-Trimethylbenzene	21.12	1.0	20	0	106	76 - 124				
1,2-Dibromo-3-chloropropane	22.63	1.0	20	0	113	62 - 128				
1,2-Dibromoethane	22.43	1.0	20	0	112	77 - 121				
1,2-Dichlorobenzene	20.61	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	21.88	1.0	20	0	109	73 - 128				
1,2-Dichloropropane	22.15	1.0	20	0	111	78 - 122				
1,3,5-Trimethylbenzene	20.4	1.0	20	0	102	75 - 124				
1,3-Dichlorobenzene	20.92	1.0	20	0	105	80 - 119				
1,3-Dichloropropane	22.18	1.0	20	0	111	80 - 119				
1,4-Dichlorobenzene	21.38	1.0	20	0	107	79 - 118				
2,2-Dichloropropane	20.78	1.0	20	0	104	60 - 139				
2-Butanone	47.4	2.0	40	0	119	56 - 143				
2-Chlorotoluene	22.76	1.0	20	0	114	79 - 122				
2-Hexanone	43.16	2.0	40	0	108	57 - 139				
4-Chlorotoluene	22.02	1.0	20	0	110	78 - 122				
4-Isopropyltoluene	19.29	1.0	20	0	96.4	77 - 127				
4-Methyl-2-pentanone	42.01	2.0	40	0	105	67 - 130				
Acetone	47.36	2.0	40	0	118	39 - 160				
Benzene	21.6	1.0	20	0	108	79 - 120				
Bromobenzene	21.66	1.0	20	0	108	80 - 120				
Bromochloromethane	20.5	1.0	20	0	103	78 - 123				
Bromodichloromethane	22.41	1.0	20	0	112	79 - 125				
Bromoform	22.24	1.0	20	0	111	66 - 130				
Bromomethane	21.84	1.0	20	0	109	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201220** Units: **ug/L** Analysis Date: **20-Dec-2020 12:30**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890035** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	44.27	2.0	40	0	111	64 - 133				
Carbon tetrachloride	21.29	1.0	20	0	106	72 - 136				
Chlorobenzene	21.25	1.0	20	0	106	82 - 118				
Chloroethane	17.69	1.0	20	0	88.4	60 - 138				
Chloroform	21.16	1.0	20	0	106	79 - 124				
Chloromethane	16.07	1.0	20	0	80.4	50 - 139				
cis-1,2-Dichloroethene	20.86	1.0	20	0	104	78 - 123				
cis-1,3-Dichloropropene	22.22	1.0	20	0	111	75 - 124				
Dibromochloromethane	21.79	1.0	20	0	109	74 - 126				
Dibromomethane	22.51	1.0	20	0	113	79 - 123				
Dichlorodifluoromethane	18.2	1.0	20	0	91.0	32 - 152				
Ethylbenzene	21.89	1.0	20	0	109	79 - 121				
Hexachlorobutadiene	23.58	1.0	20	0	118	66 - 134				
Isopropylbenzene	20.01	1.0	20	0	100	72 - 131				
m,p-Xylene	41.63	2.0	40	0	104	80 - 121				
Methylene chloride	20.65	2.0	20	0	103	74 - 124				
Naphthalene	21.84	1.0	20	0	109	61 - 128				
n-Butylbenzene	20.94	1.0	20	0	105	75 - 128				
n-Propylbenzene	21.47	1.0	20	0	107	76 - 126				
o-Xylene	20.95	1.0	20	0	105	78 - 122				
sec-Butylbenzene	19.43	1.0	20	0	97.2	77 - 126				
Styrene	20.93	1.0	20	0	105	78 - 123				
tert-Butylbenzene	20.01	1.0	20	0	100	78 - 124				
Tetrachloroethene	20.69	1.0	20	0	103	74 - 129				
Toluene	21.67	1.0	20	0	108	80 - 121				
trans-1,2-Dichloroethene	20.23	1.0	20	0	101	75 - 124				
trans-1,3-Dichloropropene	22.76	1.0	20	0	114	73 - 127				
Trichloroethene	20.24	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	17.91	1.0	20	0	89.6	65 - 141				
Vinyl chloride	18.59	1.0	20	0	93.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.3*	*1.0*	*50*	*0*	*98.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.49*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*48.92*	*1.0*	*50*	*0*	*97.8*	*80 - 119*				
Surr: Toluene-d8	*50.8*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120556-02MS** Units: **ug/L** Analysis Date: **20-Dec-2020 14:58**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890041** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.11	1.0	20	0	95.6	78 - 124				
1,1,1-Trichloroethane	18.41	1.0	20	0	92.0	74 - 131				
1,1,2,2-Tetrachloroethane	18.25	1.0	20	0	91.2	71 - 121				
1,1,2-Trichloroethane	19.32	1.0	20	0	96.6	80 - 119				
1,1-Dichloroethane	17.58	1.0	20	0	87.9	77 - 125				
1,1-Dichloroethene	16.94	1.0	20	0	84.7	71 - 131				
1,1-Dichloropropene	20.31	1.0	20	0	102	78 - 125				
1,2,3-Trichlorobenzene	18.91	1.0	20	0	94.5	69 - 129				
1,2,3-Trichloropropane	17.78	1.0	20	0	88.9	73 - 122				
1,2,4-Trichlorobenzene	20.33	1.0	20	0	102	69 - 130				
1,2,4-Trimethylbenzene	19.51	1.0	20	0	97.6	76 - 124				
1,2-Dibromo-3-chloropropane	16.46	1.0	20	0	82.3	62 - 128				
1,2-Dibromoethane	18.63	1.0	20	0	93.2	77 - 121				
1,2-Dichlorobenzene	17.82	1.0	20	0	89.1	80 - 119				
1,2-Dichloroethane	17.7	1.0	20	0	88.5	73 - 128				
1,2-Dichloropropane	19.42	1.0	20	0	97.1	78 - 122				
1,3,5-Trimethylbenzene	19.09	1.0	20	0	95.5	75 - 124				
1,3-Dichlorobenzene	18.54	1.0	20	0	92.7	80 - 119				
1,3-Dichloropropane	19.58	1.0	20	0	97.9	80 - 119				
1,4-Dichlorobenzene	19.58	1.0	20	0	97.9	79 - 118				
2,2-Dichloropropane	18.88	1.0	20	0	94.4	60 - 139				
2-Butanone	31.98	2.0	40	0	80.0	56 - 143				
2-Chlorotoluene	20.29	1.0	20	0	101	79 - 122				
2-Hexanone	34.81	2.0	40	0	87.0	57 - 139				
4-Chlorotoluene	19.32	1.0	20	0	96.6	78 - 122				
4-Isopropyltoluene	19.86	1.0	20	0	99.3	77 - 127				
4-Methyl-2-pentanone	34.04	2.0	40	0	85.1	67 - 130				
Acetone	23.76	2.0	40	0	59.4	39 - 160				
Benzene	19.03	1.0	20	0	95.2	79 - 120				
Bromobenzene	18.45	1.0	20	0	92.2	80 - 120				
Bromochloromethane	17.19	1.0	20	0	85.9	78 - 123				
Bromodichloromethane	19.39	1.0	20	0	96.9	79 - 125				
Bromoform	18.4	1.0	20	0	92.0	66 - 130				
Bromomethane	19.69	1.0	20	0	98.5	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120556-02MS** Units: **ug/L** Analysis Date: **20-Dec-2020 14:58**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890041** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.84	2.0	40	0	94.6	64 - 133				
Carbon tetrachloride	21.07	1.0	20	0	105	72 - 136				
Chlorobenzene	18.7	1.0	20	0	93.5	82 - 118				
Chloroethane	16.33	1.0	20	0	81.7	60 - 138				
Chloroform	17.93	1.0	20	0	89.6	79 - 124				
Chloromethane	12.59	1.0	20	0	63.0	50 - 139				
cis-1,2-Dichloroethene	17.76	1.0	20	0	88.8	78 - 123				
cis-1,3-Dichloropropene	18.4	1.0	20	0	92.0	75 - 124				
Dibromochloromethane	18.57	1.0	20	0	92.8	74 - 126				
Dibromomethane	18.18	1.0	20	0	90.9	79 - 123				
Dichlorodifluoromethane	15.56	1.0	20	0	77.8	32 - 152				
Ethylbenzene	20.8	1.0	20	0	104	79 - 121				
Hexachlorobutadiene	23.13	1.0	20	0	116	66 - 134				
Isopropylbenzene	20.13	1.0	20	0	101	72 - 131				
m,p-Xylene	39.2	2.0	40	0	98.0	80 - 121				
Methylene chloride	17.04	2.0	20	0	85.2	74 - 124				
Naphthalene	16.87	1.0	20	0	84.4	61 - 128				
n-Butylbenzene	21.31	1.0	20	0	107	75 - 128				
n-Propylbenzene	20.87	1.0	20	0	104	76 - 126				
o-Xylene	19.03	1.0	20	0	95.1	78 - 122				
sec-Butylbenzene	20.73	1.0	20	0	104	77 - 126				
Styrene	18.47	1.0	20	0	92.3	78 - 123				
tert-Butylbenzene	20.33	1.0	20	0	102	78 - 124				
Tetrachloroethene	21.71	1.0	20	0	109	74 - 129				
Toluene	20.01	1.0	20	0	100	80 - 121				
trans-1,2-Dichloroethene	18.39	1.0	20	0	91.9	75 - 124				
trans-1,3-Dichloropropene	18.43	1.0	20	0	92.2	73 - 127				
Trichloroethene	19.01	1.0	20	0	95.1	79 - 123				
Trichlorofluoromethane	17.67	1.0	20	0	88.3	65 - 141				
Vinyl chloride	17	1.0	20	0	85.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.64*	*1.0*	*50*	*0*	*89.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.78*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*45.36*	*1.0*	*50*	*0*	*90.7*	*80 - 119*				
Surr: Toluene-d8	*51.44*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120556-02MSD** Units: **ug/L** Analysis Date: **20-Dec-2020 15:19**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890042** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.57	1.0	20	0	97.9	78 - 124	19.11	2.39	20	
1,1,1-Trichloroethane	19.09	1.0	20	0	95.5	74 - 131	18.41	3.66	20	
1,1,2,2-Tetrachloroethane	19.83	1.0	20	0	99.1	71 - 121	18.25	8.29	20	
1,1,2-Trichloroethane	19.12	1.0	20	0	95.6	80 - 119	19.32	1.04	20	
1,1-Dichloroethane	16.97	1.0	20	0	84.8	77 - 125	17.58	3.53	20	
1,1-Dichloroethene	16.31	1.0	20	0	81.6	71 - 131	16.94	3.78	20	
1,1-Dichloropropene	20.74	1.0	20	0	104	78 - 125	20.31	2.08	20	
1,2,3-Trichlorobenzene	22.34	1.0	20	0	112	69 - 129	18.91	16.6	20	
1,2,3-Trichloropropane	19.37	1.0	20	0	96.9	73 - 122	17.78	8.55	20	
1,2,4-Trichlorobenzene	21.53	1.0	20	0	108	69 - 130	20.33	5.71	20	
1,2,4-Trimethylbenzene	20.7	1.0	20	0	104	76 - 124	19.51	5.93	20	
1,2-Dibromo-3-chloropropane	19.62	1.0	20	0	98.1	62 - 128	16.46	17.5	20	
1,2-Dibromoethane	18.69	1.0	20	0	93.4	77 - 121	18.63	0.287	20	
1,2-Dichlorobenzene	19.37	1.0	20	0	96.9	80 - 119	17.82	8.35	20	
1,2-Dichloroethane	18.62	1.0	20	0	93.1	73 - 128	17.7	5.03	20	
1,2-Dichloropropane	19.17	1.0	20	0	95.8	78 - 122	19.42	1.28	20	
1,3,5-Trimethylbenzene	20.31	1.0	20	0	102	75 - 124	19.09	6.18	20	
1,3-Dichlorobenzene	19.57	1.0	20	0	97.8	80 - 119	18.54	5.4	20	
1,3-Dichloropropane	20.03	1.0	20	0	100	80 - 119	19.58	2.24	20	
1,4-Dichlorobenzene	20.27	1.0	20	0	101	79 - 118	19.58	3.47	20	
2,2-Dichloropropane	18.99	1.0	20	0	94.9	60 - 139	18.88	0.576	20	
2-Butanone	31.93	2.0	40	0	79.8	56 - 143	31.98	0.182	20	
2-Chlorotoluene	21.55	1.0	20	0	108	79 - 122	20.29	6	20	
2-Hexanone	35.27	2.0	40	0	88.2	57 - 139	34.81	1.32	20	
4-Chlorotoluene	20.03	1.0	20	0	100	78 - 122	19.32	3.59	20	
4-Isopropyltoluene	20.66	1.0	20	0	103	77 - 127	19.86	3.95	20	
4-Methyl-2-pentanone	36.95	2.0	40	0	92.4	67 - 130	34.04	8.19	20	
Acetone	23.49	2.0	40	0	58.7	39 - 160	23.76	1.14	20	
Benzene	19.17	1.0	20	0	95.8	79 - 120	19.03	0.696	20	
Bromobenzene	20.35	1.0	20	0	102	80 - 120	18.45	9.81	20	
Bromochloromethane	16.64	1.0	20	0	83.2	78 - 123	17.19	3.24	20	
Bromodichloromethane	19.76	1.0	20	0	98.8	79 - 125	19.39	1.93	20	
Bromoform	19.38	1.0	20	0	96.9	66 - 130	18.4	5.18	20	
Bromomethane	18.18	1.0	20	0	90.9	53 - 141	19.69	7.98	20	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120556-02MSD** Units: **ug/L** Analysis Date: **20-Dec-2020 15:19**
Client ID: Run ID: **VOA6_375029** SeqNo: **5890042** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	37.47	2.0	40	0	93.7	64 - 133	37.84	0.991	20	
Carbon tetrachloride	21.22	1.0	20	0	106	72 - 136	21.07	0.729	20	
Chlorobenzene	18.7	1.0	20	0	93.5	82 - 118	18.7	0.0311	20	
Chloroethane	16.28	1.0	20	0	81.4	60 - 138	16.33	0.317	20	
Chloroform	18.01	1.0	20	0	90.1	79 - 124	17.93	0.473	20	
Chloromethane	13.09	1.0	20	0	65.4	50 - 139	12.59	3.86	20	
cis-1,2-Dichloroethene	18.37	1.0	20	0	91.9	78 - 123	17.76	3.39	20	
cis-1,3-Dichloropropene	19.18	1.0	20	0	95.9	75 - 124	18.4	4.15	20	
Dibromochloromethane	18.9	1.0	20	0	94.5	74 - 126	18.57	1.8	20	
Dibromomethane	19.03	1.0	20	0	95.1	79 - 123	18.18	4.54	20	
Dichlorodifluoromethane	15.91	1.0	20	0	79.5	32 - 152	15.56	2.24	20	
Ethylbenzene	20.89	1.0	20	0	104	79 - 121	20.8	0.455	20	
Hexachlorobutadiene	23.15	1.0	20	0	116	66 - 134	23.13	0.0888	20	
Isopropylbenzene	20.36	1.0	20	0	102	72 - 131	20.13	1.15	20	
m,p-Xylene	38.93	2.0	40	0	97.3	80 - 121	39.2	0.689	20	
Methylene chloride	17.3	2.0	20	0	86.5	74 - 124	17.04	1.49	20	
Naphthalene	20.45	1.0	20	0	102	61 - 128	16.87	19.2	20	
n-Butylbenzene	21.55	1.0	20	0	108	75 - 128	21.31	1.15	20	
n-Propylbenzene	21.55	1.0	20	0	108	76 - 126	20.87	3.21	20	
o-Xylene	18.95	1.0	20	0	94.7	78 - 122	19.03	0.422	20	
sec-Butylbenzene	21.34	1.0	20	0	107	77 - 126	20.73	2.94	20	
Styrene	18.92	1.0	20	0	94.6	78 - 123	18.47	2.45	20	
tert-Butylbenzene	21.04	1.0	20	0	105	78 - 124	20.33	3.47	20	
Tetrachloroethene	21.71	1.0	20	0	109	74 - 129	21.71	0.0281	20	
Toluene	20.37	1.0	20	0	102	80 - 121	20.01	1.78	20	
trans-1,2-Dichloroethene	18.43	1.0	20	0	92.1	75 - 124	18.39	0.217	20	
trans-1,3-Dichloropropene	18.79	1.0	20	0	93.9	73 - 127	18.43	1.91	20	
Trichloroethene	19.22	1.0	20	0	96.1	79 - 123	19.01	1.08	20	
Trichlorofluoromethane	17.04	1.0	20	0	85.2	65 - 141	17.67	3.59	20	
Vinyl chloride	16.96	1.0	20	0	84.8	58 - 137	17	0.2	20	
Surr: 1,2-Dichloroethane-d4	*45.19*	*1.0*	*50*	*0*	*90.4*	*81 - 118*	*44.64*	*1.21*	*20*	
Surr: 4-Bromofluorobenzene	*49.79*	*1.0*	*50*	*0*	*99.6*	*85 - 114*	*49.78*	*0.00958*	*20*	
Surr: Dibromofluoromethane	*44.81*	*1.0*	*50*	*0*	*89.6*	*80 - 119*	*45.36*	*1.21*	*20*	
Surr: Toluene-d8	*51.97*	*1.0*	*50*	*0*	*104*	*89 - 112*	*51.44*	*1.04*	*20*	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375029 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20120617-01	HS20120617-02	HS20120617-04	HS20120617-05
HS20120617-06	HS20120617-07	HS20120617-08	HS20120617-09
HS20120617-10	HS20120617-11		

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:55**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892736** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:55**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892736** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.69*	*1.0*	*50*	*0*	*91.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.14*	*1.0*	*50*	*0*	*94.3*	*85 - 114*				
Surr: Dibromofluoromethane	*44.65*	*1.0*	*50*	*0*	*89.3*	*80 - 119*				
Surr: Toluene-d8	*52.13*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:13**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.87	1.0	20	0	109	78 - 124				
1,1,1-Trichloroethane	22.16	1.0	20	0	111	74 - 131				
1,1,2,2-Tetrachloroethane	22.89	1.0	20	0	114	71 - 121				
1,1,2-Trichloroethane	22.28	1.0	20	0	111	80 - 119				
1,1-Dichloroethane	21.16	1.0	20	0	106	77 - 125				
1,1-Dichloroethene	19.04	1.0	20	0	95.2	71 - 131				
1,1-Dichloropropene	21.7	1.0	20	0	109	78 - 125				
1,2,3-Trichlorobenzene	24.69	1.0	20	0	123	69 - 129				
1,2,3-Trichloropropane	22.76	1.0	20	0	114	73 - 122				
1,2,4-Trichlorobenzene	25.56	1.0	20	0	128	69 - 130				
1,2,4-Trimethylbenzene	20.94	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	22.21	1.0	20	0	111	62 - 128				
1,2-Dibromoethane	22.19	1.0	20	0	111	77 - 121				
1,2-Dichlorobenzene	20.53	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	22.9	1.0	20	0	114	73 - 128				
1,2-Dichloropropane	23.03	1.0	20	0	115	78 - 122				
1,3,5-Trimethylbenzene	20.13	1.0	20	0	101	75 - 124				
1,3-Dichlorobenzene	21.13	1.0	20	0	106	80 - 119				
1,3-Dichloropropane	23.27	1.0	20	0	116	80 - 119				
1,4-Dichlorobenzene	21.04	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	21.81	1.0	20	0	109	60 - 139				
2-Butanone	50.69	2.0	40	0	127	56 - 143				
2-Chlorotoluene	22	1.0	20	0	110	79 - 122				
2-Hexanone	45.96	2.0	40	0	115	57 - 139				
4-Chlorotoluene	21.06	1.0	20	0	105	78 - 122				
4-Isopropyltoluene	19.44	1.0	20	0	97.2	77 - 127				
4-Methyl-2-pentanone	44.58	2.0	40	0	111	67 - 130				
Acetone	52.59	2.0	40	0	131	39 - 160				
Benzene	22.24	1.0	20	0	111	79 - 120				
Bromobenzene	22.03	1.0	20	0	110	80 - 120				
Bromochloromethane	21.68	1.0	20	0	108	78 - 123				
Bromodichloromethane	23.16	1.0	20	0	116	79 - 125				
Bromoform	22.03	1.0	20	0	110	66 - 130				
Bromomethane	23.34	1.0	20	0	117	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:13**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	47.57	2.0	40	0	119	64 - 133				
Carbon tetrachloride	22.16	1.0	20	0	111	72 - 136				
Chlorobenzene	20.91	1.0	20	0	105	82 - 118				
Chloroethane	19.19	1.0	20	0	96.0	60 - 138				
Chloroform	22.29	1.0	20	0	111	79 - 124				
Chloromethane	16.01	1.0	20	0	80.0	50 - 139				
cis-1,2-Dichloroethene	21.68	1.0	20	0	108	78 - 123				
cis-1,3-Dichloropropene	22.96	1.0	20	0	115	75 - 124				
Dibromochloromethane	22.05	1.0	20	0	110	74 - 126				
Dibromomethane	23.4	1.0	20	0	117	79 - 123				
Dichlorodifluoromethane	19.22	1.0	20	0	96.1	32 - 152				
Ethylbenzene	21.69	1.0	20	0	108	79 - 121				
Hexachlorobutadiene	22.96	1.0	20	0	115	66 - 134				
Isopropylbenzene	19.91	1.0	20	0	99.5	72 - 131				
m,p-Xylene	41.68	2.0	40	0	104	80 - 121				
Methylene chloride	22.47	2.0	20	0	112	74 - 124				
Naphthalene	23.83	1.0	20	0	119	61 - 128				
n-Butylbenzene	20.47	1.0	20	0	102	75 - 128				
n-Propylbenzene	21.46	1.0	20	0	107	76 - 126				
o-Xylene	21.34	1.0	20	0	107	78 - 122				
sec-Butylbenzene	19.78	1.0	20	0	98.9	77 - 126				
Styrene	20.68	1.0	20	0	103	78 - 123				
tert-Butylbenzene	19.4	1.0	20	0	97.0	78 - 124				
Tetrachloroethene	21.04	1.0	20	0	105	74 - 129				
Toluene	21.98	1.0	20	0	110	80 - 121				
trans-1,2-Dichloroethene	22.98	1.0	20	0	115	75 - 124				
trans-1,3-Dichloropropene	23.18	1.0	20	0	116	73 - 127				
Trichloroethene	20.96	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	19.14	1.0	20	0	95.7	65 - 141				
Vinyl chloride	19.74	1.0	20	0	98.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.83*	*1.0*	*50*	*0*	*104*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.21*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*50.01*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*51.14*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120803-01MS** Units: **ug/L** Analysis Date: **21-Dec-2020 15:43**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892744** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.14	1.0	20	0	95.7	78 - 124				
1,1,1-Trichloroethane	19.42	1.0	20	0	97.1	74 - 131				
1,1,2,2-Tetrachloroethane	19.69	1.0	20	0	98.5	71 - 121				
1,1,2-Trichloroethane	18.91	1.0	20	0	94.6	80 - 119				
1,1-Dichloroethane	18.49	1.0	20	0	92.4	77 - 125				
1,1-Dichloroethene	17.01	1.0	20	0	85.1	71 - 131				
1,1-Dichloropropene	20.64	1.0	20	0	103	78 - 125				
1,2,3-Trichlorobenzene	18.82	1.0	20	0	94.1	69 - 129				
1,2,3-Trichloropropane	19.42	1.0	20	0	97.1	73 - 122				
1,2,4-Trichlorobenzene	19.36	1.0	20	0	96.8	69 - 130				
1,2,4-Trimethylbenzene	21.1	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	19.11	1.0	20	0	95.5	62 - 128				
1,2-Dibromoethane	18.91	1.0	20	0	94.5	77 - 121				
1,2-Dichlorobenzene	19.22	1.0	20	0	96.1	80 - 119				
1,2-Dichloroethane	18.83	1.0	20	0	94.1	73 - 128				
1,2-Dichloropropane	19.38	1.0	20	0	96.9	78 - 122				
1,3,5-Trimethylbenzene	21.14	1.0	20	0	106	75 - 124				
1,3-Dichlorobenzene	19.66	1.0	20	0	98.3	80 - 119				
1,3-Dichloropropane	19.57	1.0	20	0	97.8	80 - 119				
1,4-Dichlorobenzene	20.16	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	19.05	1.0	20	0	95.3	60 - 139				
2-Butanone	36.8	2.0	40	0	92.0	56 - 143				
2-Chlorotoluene	20.92	1.0	20	0	105	79 - 122				
2-Hexanone	35.79	2.0	40	0	89.5	57 - 139				
4-Chlorotoluene	20.79	1.0	20	0	104	78 - 122				
4-Isopropyltoluene	21.93	1.0	20	0	110	77 - 127				
4-Methyl-2-pentanone	36.35	2.0	40	0	90.9	67 - 130				
Acetone	27.59	2.0	40	0	69.0	39 - 160				
Benzene	19.54	1.0	20	0	97.7	79 - 120				
Bromobenzene	20.07	1.0	20	0	100	80 - 120				
Bromochloromethane	16.96	1.0	20	0	84.8	78 - 123				
Bromodichloromethane	19.37	1.0	20	0	96.9	79 - 125				
Bromoform	19.5	1.0	20	0	97.5	66 - 130				
Bromomethane	19.78	1.0	20	0	98.9	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120803-01MS** Units: **ug/L** Analysis Date: **21-Dec-2020 15:43**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892744** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.51	2.0	40	0	93.8	64 - 133				
Carbon tetrachloride	21.84	1.0	20	0	109	72 - 136				
Chlorobenzene	19.35	1.0	20	0	96.7	82 - 118				
Chloroethane	16.83	1.0	20	0	84.2	60 - 138				
Chloroform	18.32	1.0	20	0	91.6	79 - 124				
Chloromethane	14.13	1.0	20	0	70.6	50 - 139				
cis-1,2-Dichloroethene	25.42	1.0	20	7.166	91.3	78 - 123				
cis-1,3-Dichloropropene	18.89	1.0	20	0	94.5	75 - 124				
Dibromochloromethane	18.71	1.0	20	0	93.6	74 - 126				
Dibromomethane	19.52	1.0	20	0	97.6	79 - 123				
Dichlorodifluoromethane	16.4	1.0	20	0	82.0	32 - 152				
Ethylbenzene	20.25	1.0	20	0	101	79 - 121				
Hexachlorobutadiene	23.81	1.0	20	0	119	66 - 134				
Isopropylbenzene	20.28	1.0	20	0	101	72 - 131				
m,p-Xylene	39.38	2.0	40	0	98.5	80 - 121				
Methylene chloride	17.8	2.0	20	0	89.0	74 - 124				
Naphthalene	16.71	1.0	20	0	83.6	61 - 128				
n-Butylbenzene	22.8	1.0	20	0	114	75 - 128				
n-Propylbenzene	21.19	1.0	20	0	106	76 - 126				
o-Xylene	19.48	1.0	20	0	97.4	78 - 122				
sec-Butylbenzene	22.16	1.0	20	0	111	77 - 126				
Styrene	19.31	1.0	20	0	96.6	78 - 123				
tert-Butylbenzene	21.7	1.0	20	0	109	78 - 124				
Tetrachloroethene	21.02	1.0	20	0	105	74 - 129				
Toluene	19.58	1.0	20	0	97.9	80 - 121				
trans-1,2-Dichloroethene	17.96	1.0	20	0	89.8	75 - 124				
trans-1,3-Dichloropropene	18.69	1.0	20	0	93.4	73 - 127				
Trichloroethene	22.69	1.0	20	2.069	103	79 - 123				
Trichlorofluoromethane	17.63	1.0	20	0	88.2	65 - 141				
Vinyl chloride	17.84	1.0	20	0	89.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.83*	*1.0*	*50*	*0*	*89.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.81*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*44.9*	*1.0*	*50*	*0*	*89.8*	*80 - 119*				
Surr: Toluene-d8	*50.65*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120803-01MSD** Units: **ug/L** Analysis Date: **21-Dec-2020 16:04**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.2	1.0	20	0	96.0	78 - 124	19.14	0.309	20	
1,1,1-Trichloroethane	18.1	1.0	20	0	90.5	74 - 131	19.42	7.04	20	
1,1,2,2-Tetrachloroethane	18.54	1.0	20	0	92.7	71 - 121	19.69	6.06	20	
1,1,2-Trichloroethane	18.46	1.0	20	0	92.3	80 - 119	18.91	2.4	20	
1,1-Dichloroethane	18.13	1.0	20	0	90.6	77 - 125	18.49	1.97	20	
1,1-Dichloroethene	16.34	1.0	20	0	81.7	71 - 131	17.01	3.99	20	
1,1-Dichloropropene	20.18	1.0	20	0	101	78 - 125	20.64	2.26	20	
1,2,3-Trichlorobenzene	21.37	1.0	20	0	107	69 - 129	18.82	12.7	20	
1,2,3-Trichloropropane	18.68	1.0	20	0	93.4	73 - 122	19.42	3.89	20	
1,2,4-Trichlorobenzene	20.22	1.0	20	0	101	69 - 130	19.36	4.34	20	
1,2,4-Trimethylbenzene	19.72	1.0	20	0	98.6	76 - 124	21.1	6.76	20	
1,2-Dibromo-3-chloropropane	17.98	1.0	20	0	89.9	62 - 128	19.11	6.08	20	
1,2-Dibromoethane	18.49	1.0	20	0	92.5	77 - 121	18.91	2.23	20	
1,2-Dichlorobenzene	18.54	1.0	20	0	92.7	80 - 119	19.22	3.56	20	
1,2-Dichloroethane	18.7	1.0	20	0	93.5	73 - 128	18.83	0.701	20	
1,2-Dichloropropane	18.9	1.0	20	0	94.5	78 - 122	19.38	2.54	20	
1,3,5-Trimethylbenzene	19.97	1.0	20	0	99.9	75 - 124	21.14	5.67	20	
1,3-Dichlorobenzene	18.51	1.0	20	0	92.6	80 - 119	19.66	6.04	20	
1,3-Dichloropropane	19.43	1.0	20	0	97.2	80 - 119	19.57	0.706	20	
1,4-Dichlorobenzene	18.88	1.0	20	0	94.4	79 - 118	20.16	6.55	20	
2,2-Dichloropropane	18.62	1.0	20	0	93.1	60 - 139	19.05	2.29	20	
2-Butanone	34.62	2.0	40	0	86.5	56 - 143	36.8	6.11	20	
2-Chlorotoluene	19.58	1.0	20	0	97.9	79 - 122	20.92	6.62	20	
2-Hexanone	36.29	2.0	40	0	90.7	57 - 139	35.79	1.39	20	
4-Chlorotoluene	19.54	1.0	20	0	97.7	78 - 122	20.79	6.17	20	
4-Isopropyltoluene	20.52	1.0	20	0	103	77 - 127	21.93	6.6	20	
4-Methyl-2-pentanone	37.79	2.0	40	0	94.5	67 - 130	36.35	3.89	20	
Acetone	27.58	2.0	40	0	68.9	39 - 160	27.59	0.0652	20	
Benzene	18.89	1.0	20	0	94.5	79 - 120	19.54	3.37	20	
Bromobenzene	18.88	1.0	20	0	94.4	80 - 120	20.07	6.1	20	
Bromochloromethane	17.91	1.0	20	0	89.6	78 - 123	16.96	5.43	20	
Bromodichloromethane	18.97	1.0	20	0	94.9	79 - 125	19.37	2.1	20	
Bromoform	18.99	1.0	20	0	94.9	66 - 130	19.5	2.66	20	
Bromomethane	18.04	1.0	20	0	90.2	53 - 141	19.78	9.21	20	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120617

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120803-01MSD** Units: **ug/L** Analysis Date: **21-Dec-2020 16:04**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	36.67	2.0	40	0	91.7	64 - 133	37.51	2.28	20	
Carbon tetrachloride	20.77	1.0	20	0	104	72 - 136	21.84	5.03	20	
Chlorobenzene	18.52	1.0	20	0	92.6	82 - 118	19.35	4.34	20	
Chloroethane	16.26	1.0	20	0	81.3	60 - 138	16.83	3.47	20	
Chloroform	17.76	1.0	20	0	88.8	79 - 124	18.32	3.09	20	
Chloromethane	14.05	1.0	20	0	70.2	50 - 139	14.13	0.567	20	
cis-1,2-Dichloroethene	24.84	1.0	20	7.166	88.4	78 - 123	25.42	2.31	20	
cis-1,3-Dichloropropene	18.93	1.0	20	0	94.6	75 - 124	18.89	0.195	20	
Dibromochloromethane	18.75	1.0	20	0	93.8	74 - 126	18.71	0.203	20	
Dibromomethane	18.74	1.0	20	0	93.7	79 - 123	19.52	4.09	20	
Dichlorodifluoromethane	16.24	1.0	20	0	81.2	32 - 152	16.4	0.99	20	
Ethylbenzene	19.93	1.0	20	0	99.6	79 - 121	20.25	1.62	20	
Hexachlorobutadiene	24.37	1.0	20	0	122	66 - 134	23.81	2.32	20	
Isopropylbenzene	19.97	1.0	20	0	99.9	72 - 131	20.28	1.52	20	
m,p-Xylene	39.28	2.0	40	0	98.2	80 - 121	39.38	0.261	20	
Methylene chloride	18.25	2.0	20	0	91.3	74 - 124	17.8	2.52	20	
Naphthalene	18.67	1.0	20	0	93.4	61 - 128	16.71	11.1	20	
n-Butylbenzene	21.83	1.0	20	0	109	75 - 128	22.8	4.33	20	
n-Propylbenzene	20.01	1.0	20	0	100	76 - 126	21.19	5.74	20	
o-Xylene	19.18	1.0	20	0	95.9	78 - 122	19.48	1.55	20	
sec-Butylbenzene	20.6	1.0	20	0	103	77 - 126	22.16	7.29	20	
Styrene	19.17	1.0	20	0	95.8	78 - 123	19.31	0.765	20	
tert-Butylbenzene	20.68	1.0	20	0	103	78 - 124	21.7	4.84	20	
Tetrachloroethene	20.58	1.0	20	0	103	74 - 129	21.02	2.11	20	
Toluene	19.07	1.0	20	0	95.3	80 - 121	19.58	2.65	20	
trans-1,2-Dichloroethene	18.54	1.0	20	0	92.7	75 - 124	17.96	3.2	20	
trans-1,3-Dichloropropene	18.67	1.0	20	0	93.3	73 - 127	18.69	0.112	20	
Trichloroethene	20.4	1.0	20	2.069	91.7	79 - 123	22.69	10.6	20	
Trichlorofluoromethane	16.96	1.0	20	0	84.8	65 - 141	17.63	3.91	20	
Vinyl chloride	17.01	1.0	20	0	85.1	58 - 137	17.84	4.73	20	
Surr: 1,2-Dichloroethane-d4	*45.51*	*1.0*	*50*	*0*	*91.0*	*81 - 118*	*44.83*	*1.5*	*20*	
Surr: 4-Bromofluorobenzene	*49*	*1.0*	*50*	*0*	*98.0*	*85 - 114*	*49.81*	*1.65*	*20*	
Surr: Dibromofluoromethane	*45.38*	*1.0*	*50*	*0*	*90.8*	*80 - 119*	*44.9*	*1.07*	*20*	
Surr: Toluene-d8	*50.23*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.65*	*0.831*	*20*	

ALS Houston, US Date: 31-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	LHAAP 18 24
WorkOrder:	HS20120617

QC BATCH REPORT

Batch ID:	**R375144 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20120617-02 HS20120617-03

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: **HS20120617**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120617

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120617-01	18CPTMW03SW_121020	Login	12/11/2020 5:16:59 PM	JRM	MET024
HS20120617-01	18CPTMW03SW_121020	Login	12/11/2020 5:16:59 PM	JRM	Sub
HS20120617-01	18CPTMW03SW_121020	Login	12/11/2020 5:16:59 PM	JRM	EXT135
HS20120617-01	18CPTMW03SW_121020	Login	12/11/2020 5:16:59 PM	JRM	VOA104
HS20120617-06	MW20-121020	Login	12/11/2020 5:16:59 PM	JRM	Sub
HS20120617-06	MW20-121020	Login	12/11/2020 5:16:59 PM	JRM	EXT135
HS20120617-06	MW20-121020	Login	12/11/2020 5:16:59 PM	JRM	VOA104
HS20120617-08	MW19_121020	Login	12/11/2020 5:16:59 PM	JRM	MET024
HS20120617-08	MW19_121020	Login	12/11/2020 5:16:59 PM	JRM	Sub
HS20120617-08	MW19_121020	Login	12/11/2020 5:16:59 PM	JRM	VOA104
HS20120617-09	18CPTMW19_121020	Login	12/11/2020 5:16:59 PM	JRM	Sub
HS20120617-09	18CPTMW19_121020	Login	12/11/2020 5:16:59 PM	JRM	EXT135
HS20120617-09	18CPTMW19_121020	Login	12/11/2020 5:16:59 PM	JRM	VOA104
HS20120617-10	18WW17_121020	Login	12/11/2020 5:16:59 PM	JRM	MET024
HS20120617-10	18WW17_121020	Login	12/11/2020 5:16:59 PM	JRM	Sub
HS20120617-10	18WW17_121020	Login	12/11/2020 5:16:59 PM	JRM	VOA104
HS20120617-11	Trip Blank	Login	12/11/2020 5:16:59 PM	JRM	VOA104

ALS Houston, US Date: 31-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120617 **Date/Time Received:** **11-Dec-2020 10:15**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By: */S/ Jared R. Makan* (eSignature) 10-Dec-2020 20:15 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 14-Dec-2020 08:51 (Date/Time)

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	2.8°C/2.8°C UC/C-	IR25
Cooler(s)/Kit(s):	46520	
Date/Time sample(s) sent to storage:	12/11/2020 29:27	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate
ENVIRONMENTAL ASSOCIATES INC.

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS	1, 4 - DIOXANE							Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
18CPTMW03SW_121020	10 DEC 2020	0775	-	N		WG	6	X	X	X	X										
MW2_121020	10 DEC 2020	0815	-	N		WG	6	X	X	X	X										
18CPTMW01SW_121020	10 DEC 2020	0900	-	N		WG	6	X	X	X	X										
18CPTMW22R_121020	10 DEC 2020	0950		N		WG	6	X	X	X	X										
18CPTMW22SW_121020	10 DEC 2020	1035		N		WG	6	X	X	X	X										
MW20_121020	10 DEC 2020	1120	-	N		WG	4	X	X												
MW20_121020_a	10 DEC 2020	1120	-	FD		WG	4	X	X												
MW19_121020	10 DEC 2020	1205	-	N		WG	5	X	X	X											
18CPTMW19_121020	10 DEC 2020	1250	-	N		WG	5	X	X		X										
18WW17_121020	10 DEC 2020	1305	-	N		WG	5	X	X	X											
TRIP BLANK	10 DEC 2020		-	TB		W	2	X													

Sample Analysis Requested (5) | Quality Assurance Samples (6)

HS20120617

Bhate Environmental Associates, Inc.
LHAAP 18 24

COMMENTS: ____

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	12/10/20	1430	1. PM	12-11-20	10:15
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.:

Method of Shipment: ____

Fed Ex ____ Airbill Number: ____

Analytical Lab: ALS 10450 Stanchiff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

4652C 2.EC IR 25 <FD

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5867

46520

CUSTODY SEAL

Date: 12/10/20 Time: 1430
Name: Scott Beesinger
Company: Bhate

Seal Broken By: SM
Date: 12/11/20

46520 DEC 11 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46520

ORIGIN ID:SGRA (303) 592-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
RM202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 25NOV20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-B075073-RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8883 1320

FRI - 11 DEC AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

December 23, 2020 Service Request No:E2001228

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120617

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 14, 2020
For your reference, these analyses have been assigned our service request number **E2001228.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001228
Project:	HS20120617	**Date Received:**	12/14/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Ten samples were received for analysis at ALS Environmental in Houston on 12/14/20. The samples were received in good condition and are consistent with the accompanying chain of custody form.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000710: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001228
Project: HS20120617

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001228-001	18CPTMW3SW_121020	12/10/2020	0725
E2001228-002	MW2_121020	12/10/2020	0815
E2001228-003	18CPTMW01SW_121020	12/10/2020	0900
E2001228-004	18CPTMW22R_121020	12/10/2020	0950
E2001228-005	18CPTMW22SW_121020	12/10/2020	1035
E2001228-006	MW20_121020	12/10/2020	1120
E2001228-007	MW20_121020_a	12/10/2020	1120
E2001228-008	MW19_121020	12/10/2020	1205
E2001228-009	18CPTMW19_121020	12/10/2020	1250
E2001228-010	18WW17_121020	12/10/2020	1305

Service Request Summary

Folder #: **E2001228**
Client Name: ALS Environmental - US
Project Name: HS20120617
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/14/20
Internal Due Date: 12/28/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120617
EDD: No EDD Specified

10 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001228-001	18CPTMW3SW_121020	Ground Water	12/10/20 0725	**IV**
E2001228-002	MW2_121020	Ground Water	12/10/20 0815	**IV**
E2001228-003	18CPTMW01SW_121020	Ground Water	12/10/20 0900	**IV**
E2001228-004	18CPTMW22R_121020	Ground Water	12/10/20 0950	**IV**
E2001228-005	18CPTMW22SW_121020	Ground Water	12/10/20 1035	**IV**
E2001228-006	MW20_121020	Ground Water	12/10/20 1120	**IV**
E2001228-007	MW20_121020_a	Ground Water	12/10/20 1120	**IV**
E2001228-008	MW19_121020	Ground Water	12/10/20 1205	**IV**
E2001228-009	18CPTMW19_121020	Ground Water	12/10/20 1250	**IV**
E2001228-010	18WW17_121020	Ground Water	12/10/20 1305	**IV**

Service Request Summary

Folder #: **E2001228**
Client Name: ALS Environmental - US
Project Name: HS20120617
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/14/20
Internal Due Date: 12/28/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120617
EDD: No EDD Specified

10 125 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	10	II Due 12/28, IV due 1/5

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

E2001228 5
ALS Laboratory Group
HS20120617

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Texas**

COC ID: **15327**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120617
TSR:	Danielle Winnings

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS20120617-01**	**18CPTMW035SW_121020**	**Groundwater**	**10 Dec 2020 07:25**
	SUB_Perch-6850			24 Dec 2020
2.	**HS20120617-02**	**MW2_121020**	**Groundwater**	**10 Dec 2020 08:15**
	SUB_Perch-6850			24 Dec 2020
3.	**HS20120617-03**	**18CPTMW01SW_121020**	**Groundwater**	**10 Dec 2020 09:00**
	SUB_Perch-6850			24 Dec 2020
4.	**HS20120617-04**	**18CPTMW22R_121020**	**Groundwater**	**10 Dec 2020 09:50**
	SUB_Perch-6850			24 Dec 2020
5.	**HS20120617-05**	**18CPTMW22SW_121020**	**Groundwater**	**10 Dec 2020 10:35**
	SUB_Perch-6850			24 Dec 2020
6.	**HS20120617-06**	**MW20-121020**	**Groundwater**	**10 Dec 2020 11:20**
	SUB_Perch-6850			24 Dec 2020
7.	**HS20120617-07**	**MW20_121020_a**	**Groundwater**	**10 Dec 2020 11:20**
	SUB_Perch-6850			24 Dec 2020
8.	**HS20120617-08**	**MW19_121020**	**Groundwater**	**10 Dec 2020 12:05**
	SUB_Perch-6850			24 Dec 2020
9.	**HS20120617-09**	**18CPTMW19_121020**	**Groundwater**	**10 Dec 2020 12:50**

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15327**

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
		SUB_Perch-6850		24 Dec 2020
10.	**HS20120617-10**	**18WW17_121020**	**Groundwater**	**10 Dec 2020 13:05**
	SUB_Perch-6850			24 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Nuttall Date/Time:

Received By: IREY L Date/Time: 12/14/20 0826

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist: CG

Client/Project: ALS-HI

Thermometer ID: IR31

Date/Time Received: 12/14/20 Initials: CG

Date/Time Logged in: 12/14/20 Initials: CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/14/20		CG	1.7	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

E2001228 5

ALS Laboratory Group HS20120617

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371574 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/17/20 08:54

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001228-001	18CPTMW3SW_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2001228-002	MW2_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2001228-003	18CPTMW01SW_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2001228-004	18CPTMW22R_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001228-005	18CPTMW22SW_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001228-006	MW20_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001228-007	MW20_121020_a	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001228-008	MW19_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001228-009	18CPTMW19_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001228-010	18WW17_121020	.01	6850/ClO4 DOD			Ground Water	10mL	
11	EQ2000710-01	MB		6850/ClO4 DOD			Liquid	10mL	
12	EQ2000710-02	LCS		6850/ClO4 DOD			Liquid	10mL	
13	EQ2000710-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000710-02 1.00µL EQ2000710-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001228-001 100.00µL E2001228-002 100.00µL E2001228-003 100.00µL E2001228-004 100.00µL E2001228-005 100.00µL E2001228-006 100.00µL
E2001228-007 100.00µL E2001228-008 100.00µL E2001228-009 100.00µL E2001228-010 100.00µL EQ2000710-01 100.00µL EQ2000710-02 100.00µL
EQ2000710-03 100.00µL

Preparation Steps

Step: Preparation
Started: 12/17/20 08:54
Finished: 12/17/20 11:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/17/2020

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 0725
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	18CPTMW3SW_121020	**Units:**	µg/L
Lab Code:	E2001228-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/17/20	12/22/20 16:19	371574	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 0815
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	MW2_121020	**Units:**	µg/L
Lab Code:	E2001228-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/17/20	12/22/20 16:26	371574	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 0900
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	18CPTMW01SW_121020	**Units:**	µg/L
Lab Code:	E2001228-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/17/20	12/22/20 16:34	371574	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 0950
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	18CPTMW22R_121020	**Units:**	µg/L
Lab Code:	E2001228-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0354**	J	0.100	0.0500	0.0250	1	12/17/20	12/21/20 19:28	371574	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 1035
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	18CPTMW22SW_121020	**Units:**	µg/L
Lab Code:	E2001228-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**5610**		20.0	10.0	5.00	200	12/17/20	12/22/20 16:42	371574	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 1120
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	MW20_121020	**Units:**	µg/L
Lab Code:	E2001228-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.508**		0.100	0.0500	0.0250	1	12/17/20	12/21/20 19:43	371574	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 1120
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	MW20_121020_a	**Units:**	µg/L
Lab Code:	E2001228-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.170**		0.100	0.0500	0.0250	1	12/17/20	12/21/20 19:51	371574	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 1205
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	MW19_121020	**Units:**	µg/L
Lab Code:	E2001228-008	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/17/20	12/22/20 17:54	371574	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 1250
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	18CPTMW19_121020	**Units:**	µg/L
Lab Code:	E2001228-009	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**2.79**		0.100	0.0500	0.0250	1	12/17/20	12/21/20 20:15	371574	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	12/10/20 1305
Sample Matrix:	Ground Water	**Date Received:**	12/14/20
Sample Name:	18WW17_121020	**Units:**	µg/L
Lab Code:	E2001228-010	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**77900**		500	250	125	5000	12/17/20	12/22/20 16:58	371574	708075	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000710-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/17/20	12/21/20 18:40	371574	707966	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Analyzed:**	12/21/20
Sample Matrix:	Ground Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	371574

	Lab Control Sample EQ2000710-02			Duplicate Lab Control Sample EQ2000710-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.118	0.100	118	0.118	0.100	118	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000710-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.118**		0.100	0.0500	0.0250	1	12/17/20	12/21/20 18:48	371574	707966	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001228
Project:	HS20120617	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000710-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.118**		0.100	0.0500	0.0250	1	12/17/20	12/21/20 18:56	371574	707966	

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December 31, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120808**

Laboratory Results for: **LHAAP 18 24**

Dear Marcia Olive,

ALS Environmental received 10 sample(s) on Dec 16, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120808

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120808-01	AWD1_121520	Groundwater		15-Dec-2020 07:40	16-Dec-2020 10:40	☐
HS20120808-02	120_121520	Groundwater		15-Dec-2020 08:25	16-Dec-2020 10:40	☐
HS20120808-03	MW14_121520	Groundwater		15-Dec-2020 09:10	16-Dec-2020 10:40	☐
HS20120808-04	MW3_121520	Groundwater		15-Dec-2020 10:00	16-Dec-2020 10:40	☐
HS20120808-05	MW3_121520-a	Groundwater		15-Dec-2020 10:00	16-Dec-2020 10:40	☐
HS20120808-06	18CPTMW14_121520	Groundwater		15-Dec-2020 10:50	16-Dec-2020 10:40	☐
HS20120808-07	18WW22_121520	Groundwater		15-Dec-2020 11:35	16-Dec-2020 10:40	☐
HS20120808-08	18CPTMW18_121520	Groundwater		15-Dec-2020 12:20	16-Dec-2020 10:40	☐
HS20120808-09	C03_121520	Groundwater		15-Dec-2020 13:10	16-Dec-2020 10:40	☐
HS20120808-10	Trip Blank	Water	CG-102720 -222	15-Dec-2020 00:00	16-Dec-2020 10:40	☐

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: LHAAP 18 24
Work Order: HS20120808

Work Order Comments

• The analysis for Perchlorate was subcontracted to our ALS Houston TX, High Resolution Lab. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160949

Sample ID: 120_121520 (HS20120808-02)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

Sample ID: AWD1_121520 (HS20120808-01), MW14_121520 (HS20120808-03)

• High %R for surrogate 4-Terphenyl-d14, it is not associate with target compound.

GCMS Volatiles by Method SW8260

Batch ID: R375495

Sample ID: 18CPTMW14_121520 (HS20120808-06)

• Lowest practical dilution for sample HS20120808-06 due to high concentration of non-target compound.

Sample ID: 18WW22_121520 (HS20120808-07MSD)

• MSD recovered outside control limits for multiple compounds

Batch ID: R375144

Sample ID: CCV

• Acetone, 2-Butanone, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene exceeded %D limits for CCV. Samples are ND for these compounds.

Metals by Method SW6020

Batch ID: 161155

Sample ID: HS20120809-01MS

• MS/MSD and DUPs are for an unrelated sample

Metals by Method SW7470

Batch ID: 160940

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD1_121520
Collection Date: 15-Dec-2020 07:40

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.53**		**0.050**	**0.050**	**0.050**	**ug/L**	5	30-Dec-2020 14:24
Surr: 2-Fluorobiphenyl	*126*		**0**	*40-140*		*%REC*	*5*	*30-Dec-2020 14:24*
Surr: 4-Terphenyl-d14	*161*	*S*	**0**	*40-140*		*%REC*	*5*	*30-Dec-2020 14:24*
Surr: Nitrobenzene-d5	*138*		**0**	*40-140*		*%REC*	*5*	*30-Dec-2020 14:24*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**3.71**		**0.0180**	**0.0500**	**0.100**	**mg/L**	10	31-Dec-2020 15:58
Antimony	**0.00133**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Arsenic	**0.0190**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Barium	**0.312**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Beryllium	**0.000282**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:14
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:14
Calcium	**2.97**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	31-Dec-2020 15:14
Chromium	**0.0131**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Cobalt	**0.00918**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Copper	**0.00259**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Iron	**8.31**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:14
Lead	**0.00220**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Magnesium	**3.69**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:14
Manganese	**0.279**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Nickel	**0.0190**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Potassium	**3.53**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:14
Selenium	**0.00318**	J	**0.00110**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:14
Sodium	**107**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:14
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:14
Vanadium	**0.00972**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
Zinc	**0.0129**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:14
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	**0.0000310**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	22-Dec-2020 16:27
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 120_121520
Collection Date: 15-Dec-2020 08:25

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	10	U	3.0	10	10	ug/L	10	21-Dec-2020 20:17
1,1,1-Trichloroethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
1,1,2,2-Tetrachloroethane	5.0	U	5.0	5.0	10	ug/L	10	21-Dec-2020 20:17
1,1,2-Trichloroethane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
1,1-Dichloroethane	**10**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 20:17
1,1-Dichloroethene	**48**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 20:17
1,1-Dichloropropene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
1,2,3-Trichlorobenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 20:17
1,2,3-Trichloropropane	10	U	5.0	10	10	ug/L	10	21-Dec-2020 20:17
1,2,4-Trichlorobenzene	10	U	5.0	10	10	ug/L	10	21-Dec-2020 20:17
1,2,4-Trimethylbenzene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 20:17
1,2-Dibromo-3-chloropropane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
1,2-Dibromoethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
1,2-Dichlorobenzene	10	U	5.0	10	10	ug/L	10	21-Dec-2020 20:17
1,2-Dichloroethane	**21**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 20:17
1,2-Dichloropropane	5.0	U	5.0	5.0	10	ug/L	10	21-Dec-2020 20:17
1,3,5-Trimethylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
1,3-Dichlorobenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 20:17
1,3-Dichloropropane	10	U	3.0	10	10	ug/L	10	21-Dec-2020 20:17
1,4-Dichlorobenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 20:17
2,2-Dichloropropane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
2-Butanone	10	U	5.0	10	20	ug/L	10	21-Dec-2020 20:17
2-Chlorotoluene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 20:17
2-Hexanone	20	U	10	20	20	ug/L	10	21-Dec-2020 20:17
4-Chlorotoluene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 20:17
4-Isopropyltoluene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 20:17
4-Methyl-2-pentanone	20	U	7.0	20	20	ug/L	10	21-Dec-2020 20:17
Acetone	10	U	4.0	10	20	ug/L	10	21-Dec-2020 20:17
Benzene	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Bromobenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 20:17
Bromochloromethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Bromodichloromethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Bromoform	5.0	U	4.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Bromomethane	5.0	U	4.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Carbon disulfide	10	U	6.0	10	20	ug/L	10	21-Dec-2020 20:17
Carbon tetrachloride	5.0	U	5.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Chlorobenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Chloroethane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Chloroform	**13**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 20:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 120_121520
Collection Date: 15-Dec-2020 08:25

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
cis-1,2-Dichloroethene	**800**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 20:17
cis-1,3-Dichloropropene	5.0	U	1.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Dibromochloromethane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Dibromomethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Dichlorodifluoromethane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Ethylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Hexachlorobutadiene	10	U	10	10	10	ug/L	10	21-Dec-2020 20:17
Isopropylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
m,p-Xylene	10	U	5.0	10	20	ug/L	10	21-Dec-2020 20:17
Methylene chloride	10	U	4.0	10	20	ug/L	10	21-Dec-2020 20:17
n-Butylbenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 20:17
n-Propylbenzene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 20:17
Naphthalene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
o-Xylene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 20:17
sec-Butylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Styrene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 20:17
tert-Butylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Tetrachloroethene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Toluene	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
trans-1,2-Dichloroethene	**6.7**	J	**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 20:17
trans-1,3-Dichloropropene	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Trichloroethene	**5,700**		**20**	**50**	**100**	**ug/L**	100	21-Dec-2020 20:38
Trichlorofluoromethane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Vinyl chloride	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 20:17
Surr: 1,2-Dichloroethane-d4	*86.2*			**0**	*81-118*	*%REC*	*100*	*21-Dec-2020 20:38*
Surr: 1,2-Dichloroethane-d4	*87.2*			**0**	*81-118*	*%REC*	*10*	*21-Dec-2020 20:17*
Surr: 4-Bromofluorobenzene	*90.0*			**0**	*85-114*	*%REC*	*100*	*21-Dec-2020 20:38*
Surr: 4-Bromofluorobenzene	*96.2*			**0**	*85-114*	*%REC*	*10*	*21-Dec-2020 20:17*
Surr: Dibromofluoromethane	*86.4*			**0**	*80-119*	*%REC*	*10*	*21-Dec-2020 20:17*
Surr: Dibromofluoromethane	*88.3*			**0**	*80-119*	*%REC*	*100*	*21-Dec-2020 20:38*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*10*	*21-Dec-2020 20:17*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*100*	*21-Dec-2020 20:38*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**9.4**		**1.0**	**1.0**	**1.0**	**ug/L**	100	30-Dec-2020 14:42
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*30-Dec-2020 14:42*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*30-Dec-2020 14:42*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*30-Dec-2020 14:42*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.

ANALYTICAL REPORT

Project: LHAAP 18 24

WorkOrder:HS20120808

Sample ID: 120_121520

Lab ID:HS20120808-02

Collection Date: 15-Dec-2020 08:25

Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW14_121520
Collection Date: 15-Dec-2020 09:10

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,1,1-Trichloroethane	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,1,2,2-Tetrachloroethane	5.0	U	5.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,1,2-Trichloroethane	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,1-Dichloroethane	**13**		**2.0**	**5.0**	**10**	**ug/L**	10	28-Dec-2020 18:03
1,1-Dichloroethene	**47**		**2.0**	**5.0**	**10**	**ug/L**	10	28-Dec-2020 18:03
1,1-Dichloropropene	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
1,2,3-Trichlorobenzene	10	U	4.0	10	10	ug/L	10	28-Dec-2020 18:03
1,2,3-Trichloropropane	10	U	5.0	10	10	ug/L	10	28-Dec-2020 18:03
1,2,4-Trichlorobenzene	10	U	5.0	10	10	ug/L	10	28-Dec-2020 18:03
1,2,4-Trimethylbenzene	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,2-Dibromo-3-chloropropane	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,2-Dibromoethane	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,2-Dichlorobenzene	10	U	5.0	10	10	ug/L	10	28-Dec-2020 18:03
1,2-Dichloroethane	**43**		**2.0**	**5.0**	**10**	**ug/L**	10	28-Dec-2020 18:03
1,2-Dichloropropane	5.0	U	5.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,3,5-Trimethylbenzene	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,3-Dichlorobenzene	10	U	4.0	10	10	ug/L	10	28-Dec-2020 18:03
1,3-Dichloropropane	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
1,4-Dichlorobenzene	10	U	4.0	10	10	ug/L	10	28-Dec-2020 18:03
2,2-Dichloropropane	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
2-Butanone	10	U	5.0	10	20	ug/L	10	28-Dec-2020 18:03
2-Chlorotoluene	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
2-Hexanone	20	U	10	20	20	ug/L	10	28-Dec-2020 18:03
4-Chlorotoluene	10	U	4.0	10	10	ug/L	10	28-Dec-2020 18:03
4-Isopropyltoluene	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
4-Methyl-2-pentanone	20	U	7.0	20	20	ug/L	10	28-Dec-2020 18:03
Acetone	10	U	4.0	10	20	ug/L	10	28-Dec-2020 18:03
Benzene	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Bromobenzene	10	U	4.0	10	10	ug/L	10	28-Dec-2020 18:03
Bromochloromethane	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Bromodichloromethane	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Bromoform	5.0	U	4.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Bromomethane	5.0	U	4.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Carbon disulfide	10	U	6.0	10	20	ug/L	10	28-Dec-2020 18:03
Carbon tetrachloride	5.0	U	5.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Chlorobenzene	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
Chloroethane	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Chloroform	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW14_121520
Collection Date: 15-Dec-2020 09:10

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
cis-1,2-Dichloroethene	**1,300**		**2.0**	**5.0**	**10**	**ug/L**	10	28-Dec-2020 18:03
cis-1,3-Dichloropropene	5.0	U	1.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Dibromochloromethane	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Dibromomethane	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Dichlorodifluoromethane	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
Ethylbenzene	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
Hexachlorobutadiene	10	U	10	10	10	ug/L	10	28-Dec-2020 18:03
Isopropylbenzene	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
m,p-Xylene	10	U	5.0	10	20	ug/L	10	28-Dec-2020 18:03
Methylene chloride	10	U	4.0	10	20	ug/L	10	28-Dec-2020 18:03
n-Butylbenzene	10	U	4.0	10	10	ug/L	10	28-Dec-2020 18:03
n-Propylbenzene	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
Naphthalene	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
o-Xylene	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
sec-Butylbenzene	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Styrene	10	U	3.0	10	10	ug/L	10	28-Dec-2020 18:03
tert-Butylbenzene	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Tetrachloroethene	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Toluene	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
trans-1,2-Dichloroethene	**11**		**2.0**	**5.0**	**10**	**ug/L**	10	28-Dec-2020 18:03
trans-1,3-Dichloropropene	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Trichloroethene	**4,400**		**20**	**50**	**100**	**ug/L**	100	28-Dec-2020 18:24
Trichlorofluoromethane	5.0	U	3.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Vinyl chloride	5.0	U	2.0	5.0	10	ug/L	10	28-Dec-2020 18:03
Surr: 1,2-Dichloroethane-d4	*83.3*			**0**	*81-118*	*%REC*	*10*	*28-Dec-2020 18:03*
Surr: 1,2-Dichloroethane-d4	*81.9*			**0**	*81-118*	*%REC*	*100*	*28-Dec-2020 18:24*
Surr: 4-Bromofluorobenzene	*92.2*			**0**	*85-114*	*%REC*	*10*	*28-Dec-2020 18:03*
Surr: 4-Bromofluorobenzene	*92.2*			**0**	*85-114*	*%REC*	*100*	*28-Dec-2020 18:24*
Surr: Dibromofluoromethane	*86.6*			**0**	*80-119*	*%REC*	*10*	*28-Dec-2020 18:03*
Surr: Dibromofluoromethane	*86.0*			**0**	*80-119*	*%REC*	*100*	*28-Dec-2020 18:24*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*10*	*28-Dec-2020 18:03*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*100*	*28-Dec-2020 18:24*
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.038**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 17:41
Surr: 2-Fluorobiphenyl	*108*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:41*
Surr: 4-Terphenyl-d14	*149*	*S*		**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:41*
Surr: Nitrobenzene-d5	*72.9*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:41*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW14_121520
Collection Date: 15-Dec-2020 09:10

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.0377**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:16
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:16
Arsenic	**0.00371**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:16
Barium	**0.282**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:16
Beryllium	**0.000353**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:16
Cadmium	**0.000762**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:16
Calcium	**105**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	31-Dec-2020 15:16
Chromium	**0.0151**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:16
Cobalt	**0.0350**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:16
Copper	**0.00112**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:16
Iron	**63.9**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:16
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:16
Magnesium	**45.3**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:16
Manganese	**2.63**		**0.00700**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:00
Nickel	**0.165**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:16
Potassium	**12.4**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:16
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:16
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:16
Sodium	**304**		**0.140**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:00
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:16
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:16
Zinc	**1.03**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:16
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:28
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW3_121520
Collection Date: 15-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,1-Dichloroethane	**4.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:36
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:36
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:36
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 15:36
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	28-Dec-2020 15:36
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:36
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	28-Dec-2020 15:36
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 15:36
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:36
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	28-Dec-2020 15:36
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Chloroform	**1.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW3_121520
Collection Date: 15-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
cis-1,2-Dichloroethene	**63**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:36
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	28-Dec-2020 15:36
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 15:36
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 15:36
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:36
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:36
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Tetrachloroethene	**1.3**		**0.30**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:36
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
trans-1,2-Dichloroethene	**2.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:36
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Trichloroethene	**360**		**1.0**	**2.5**	**5.0**	**ug/L**	5	28-Dec-2020 17:21
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:36
Vinyl chloride	**30**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:36
Surr: 1,2-Dichloroethane-d4	*85.3*			**0**	*81-118*	*%REC*	*1*	*28-Dec-2020 15:36*
Surr: 1,2-Dichloroethane-d4	*83.4*			**0**	*81-118*	*%REC*	*5*	*28-Dec-2020 17:21*
Surr: 4-Bromofluorobenzene	*92.5*			**0**	*85-114*	*%REC*	*1*	*28-Dec-2020 15:36*
Surr: 4-Bromofluorobenzene	*92.4*			**0**	*85-114*	*%REC*	*5*	*28-Dec-2020 17:21*
Surr: Dibromofluoromethane	*87.5*			**0**	*80-119*	*%REC*	*1*	*28-Dec-2020 15:36*
Surr: Dibromofluoromethane	*86.5*			**0**	*80-119*	*%REC*	*5*	*28-Dec-2020 17:21*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*5*	*28-Dec-2020 17:21*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*28-Dec-2020 15:36*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW3_121520
Collection Date: 15-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.0130**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:25
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:25
Arsenic	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:25
Barium	**0.562**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:25
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:25
Cadmium	**0.000307**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:25
Calcium	**29.6**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	31-Dec-2020 15:25
Chromium	**0.00123**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:25
Cobalt	**0.00214**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:25
Copper	**0.00156**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:25
Iron	**0.290**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:25
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:25
Magnesium	**20.0**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:25
Manganese	**2.75**		**0.00700**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:02
Nickel	**0.00736**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:25
Potassium	**1.62**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:25
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:25
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:25
Sodium	**272**		**0.140**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:02
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:25
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:25
Zinc	**0.00473**	J	**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:25
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:30
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW3_121520-a
Collection Date: 15-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,1-Dichloroethane	**4.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:57
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:57
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:57
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:57
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:57
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:57
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:57
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:57
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 15:57
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:57
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	28-Dec-2020 15:57
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:57
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	28-Dec-2020 15:57
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 15:57
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:57
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	28-Dec-2020 15:57
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Chloroform	**1.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW3_121520-a
Collection Date: 15-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
cis-1,2-Dichloroethene	**65**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:57
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:57
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	28-Dec-2020 15:57
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 15:57
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 15:57
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:57
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:57
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:57
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:57
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:57
Tetrachloroethene	**1.3**		**0.30**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:57
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
trans-1,2-Dichloroethene	**2.9**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:57
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:57
Trichloroethene	**360**		**1.0**	**2.5**	**5.0**	**ug/L**	5	28-Dec-2020 17:42
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:57
Vinyl chloride	**30**		**0.20**	**0.50**	**1.0**	**ug/L**	1	28-Dec-2020 15:57
Surr: 1,2-Dichloroethane-d4	*86.0*			**0**	*81-118*	*%REC*	*1*	*28-Dec-2020 15:57*
Surr: 1,2-Dichloroethane-d4	*84.3*			**0**	*81-118*	*%REC*	*5*	*28-Dec-2020 17:42*
Surr: 4-Bromofluorobenzene	*97.1*			**0**	*85-114*	*%REC*	*1*	*28-Dec-2020 15:57*
Surr: 4-Bromofluorobenzene	*94.5*			**0**	*85-114*	*%REC*	*5*	*28-Dec-2020 17:42*
Surr: Dibromofluoromethane	*87.3*			**0**	*80-119*	*%REC*	*5*	*28-Dec-2020 17:42*
Surr: Dibromofluoromethane	*86.5*			**0**	*80-119*	*%REC*	*1*	*28-Dec-2020 15:57*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*28-Dec-2020 15:57*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*5*	*28-Dec-2020 17:42*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW3_121520-a
Collection Date: 15-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.0125**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:27
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:27
Arsenic	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:27
Barium	**0.606**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:27
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:27
Cadmium	**0.000450**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:27
Calcium	**31.8**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	31-Dec-2020 15:27
Chromium	**0.00132**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:27
Cobalt	**0.00216**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:27
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	31-Dec-2020 15:27
Iron	**0.287**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:27
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:27
Magnesium	**21.8**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:27
Manganese	**2.97**		**0.00700**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:04
Nickel	**0.00787**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:27
Potassium	**1.74**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:27
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:27
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:27
Sodium	**298**		**0.140**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:04
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:27
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:27
Zinc	**0.00454**	J	**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:27
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:51
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW14_121520
Collection Date: 15-Dec-2020 10:50

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,1,1-Trichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,1,2,2-Tetrachloroethane	2.5	U	2.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,1,2-Trichloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,1-Dichloroethane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,1-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,1-Dichloropropene	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,2,3-Trichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,2,3-Trichloropropane	5.0	U	2.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,2,4-Trichlorobenzene	5.0	U	2.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,2,4-Trimethylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,2-Dibromo-3-chloropropane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,2-Dibromoethane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,2-Dichlorobenzene	5.0	U	2.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,2-Dichloroethane	**5.5**		**1.0**	**2.5**	**5.0**	**ug/L**	5	28-Dec-2020 16:18
1,2-Dichloropropane	2.5	U	2.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
1,3,5-Trimethylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,3-Dichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,3-Dichloropropane	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
1,4-Dichlorobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	28-Dec-2020 16:18
2,2-Dichloropropane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
2-Butanone	5.0	U	2.5	5.0	10	ug/L	5	28-Dec-2020 16:18
2-Chlorotoluene	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
2-Hexanone	10	U	5.0	10	10	ug/L	5	28-Dec-2020 16:18
4-Chlorotoluene	5.0	U	2.0	5.0	5.0	ug/L	5	28-Dec-2020 16:18
4-Isopropyltoluene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
4-Methyl-2-pentanone	10	U	3.5	10	10	ug/L	5	28-Dec-2020 16:18
Acetone	5.0	U	2.0	5.0	10	ug/L	5	28-Dec-2020 16:18
Benzene	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Bromobenzene	5.0	U	2.0	5.0	5.0	ug/L	5	28-Dec-2020 16:18
Bromochloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Bromodichloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Bromoform	2.5	U	2.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Bromomethane	2.5	U	2.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Carbon disulfide	5.0	U	3.0	5.0	10	ug/L	5	28-Dec-2020 16:18
Carbon tetrachloride	2.5	U	2.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Chlorobenzene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
Chloroethane	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Chloroform	**11**		**1.0**	**2.5**	**5.0**	**ug/L**	5	28-Dec-2020 16:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW14_121520
Collection Date: 15-Dec-2020 10:50

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
cis-1,2-Dichloroethene	**15**		**1.0**	**2.5**	**5.0**	**ug/L**	5	28-Dec-2020 16:18
cis-1,3-Dichloropropene	2.5	U	0.50	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Dibromochloromethane	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Dibromomethane	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Dichlorodifluoromethane	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Ethylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
Hexachlorobutadiene	5.0	U	5.0	5.0	5.0	ug/L	5	28-Dec-2020 16:18
Isopropylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
m,p-Xylene	5.0	U	2.5	5.0	10	ug/L	5	28-Dec-2020 16:18
Methylene chloride	5.0	U	2.0	5.0	10	ug/L	5	28-Dec-2020 16:18
n-Butylbenzene	5.0	U	2.0	5.0	5.0	ug/L	5	28-Dec-2020 16:18
n-Propylbenzene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
Naphthalene	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
o-Xylene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
sec-Butylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Styrene	5.0	U	1.5	5.0	5.0	ug/L	5	28-Dec-2020 16:18
tert-Butylbenzene	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Tetrachloroethene	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Toluene	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
trans-1,2-Dichloroethene	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
trans-1,3-Dichloropropene	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Trichloroethene	**940**		**1.0**	**2.5**	**5.0**	**ug/L**	5	28-Dec-2020 16:18
Trichlorofluoromethane	2.5	U	1.5	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Vinyl chloride	2.5	U	1.0	2.5	5.0	ug/L	5	28-Dec-2020 16:18
Surr: 1,2-Dichloroethane-d4	*83.7*			**0**	*81-118*	*%REC*	*5*	*28-Dec-2020 16:18*
Surr: 4-Bromofluorobenzene	*91.0*			**0**	*85-114*	*%REC*	*5*	*28-Dec-2020 16:18*
Surr: Dibromofluoromethane	*88.0*			**0**	*80-119*	*%REC*	*5*	*28-Dec-2020 16:18*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*5*	*28-Dec-2020 16:18*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.13**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 17:23
Surr: 2-Fluorobiphenyl	*73.3*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:23*
Surr: 4-Terphenyl-d14	*80.4*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:23*
Surr: Nitrobenzene-d5	*71.7*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:23*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW14_121520
Collection Date: 15-Dec-2020 10:50

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.295**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:29
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:29
Arsenic	**0.00176**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:29
Barium	**4.10**		**0.0190**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:06
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:29
Cadmium	**0.000284**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:29
Calcium	**458**		**0.340**	**0.500**	**5.00**	**mg/L**	10	31-Dec-2020 16:06
Chromium	**0.0240**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:29
Cobalt	**0.00711**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:29
Copper	**0.00103**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:29
Iron	**0.675**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:29
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:29
Magnesium	**116**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:29
Manganese	**0.308**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:29
Nickel	**0.00471**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:29
Potassium	**12.0**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:29
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:29
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:29
Sodium	**586**		**0.140**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:06
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:29
Vanadium	**0.000944**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:29
Zinc	**0.00648**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:29
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:53
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW22_121520
Collection Date: 15-Dec-2020 11:35

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:32
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:32
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:32
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:32
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:32
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:32
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:32
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 14:32
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:32
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	28-Dec-2020 14:32
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:32
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	28-Dec-2020 14:32
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 14:32
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:32
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	28-Dec-2020 14:32
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:32
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW22_121520
Collection Date: 15-Dec-2020 11:35

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:32
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	28-Dec-2020 14:32
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 14:32
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 14:32
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:32
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:32
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:32
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:32
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:32
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:32
Surr: 1,2-Dichloroethane-d4	*86.3*			**0**	*81-118*	*%REC*	*1*	*28-Dec-2020 14:32*
Surr: 4-Bromofluorobenzene	*91.7*			**0**	*85-114*	*%REC*	*1*	*28-Dec-2020 14:32*
Surr: Dibromofluoromethane	*89.3*			**0**	*80-119*	*%REC*	*1*	*28-Dec-2020 14:32*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*28-Dec-2020 14:32*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 17:05
Surr: 2-Fluorobiphenyl	*76.7*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:05*
Surr: 4-Terphenyl-d14	*83.2*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:05*
Surr: Nitrobenzene-d5	*74.0*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 17:05*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW22_121520
Collection Date: 15-Dec-2020 11:35

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.130**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:31
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:31
Arsenic	**0.00156**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:31
Barium	**0.132**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:31
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:31
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:31
Calcium	**25.8**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	31-Dec-2020 15:31
Chromium	**0.0176**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:31
Cobalt	**0.000246**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:31
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	31-Dec-2020 15:31
Iron	**0.0323**	J	**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:31
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:31
Magnesium	**4.82**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:31
Manganese	**0.00177**	J	**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:31
Nickel	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:31
Potassium	**4.90**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:31
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:31
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:31
Sodium	**52.5**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:31
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:31
Vanadium	**0.0191**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:31
Zinc	0.00250	U	0.00200	0.00250	0.00500	mg/L	1	31-Dec-2020 15:31
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:55
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW18_121520
Collection Date: 15-Dec-2020 12:20

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:53
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:53
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 14:53
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	28-Dec-2020 14:53
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:53
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	28-Dec-2020 14:53
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 14:53
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:53
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	28-Dec-2020 14:53
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW18_121520
Collection Date: 15-Dec-2020 12:20

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	28-Dec-2020 14:53
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 14:53
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 14:53
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:53
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:53
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:53
Surr: 1,2-Dichloroethane-d4	*85.9*			**0**	*81-118*	*%REC*	*1*	*28-Dec-2020 14:53*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*1*	*28-Dec-2020 14:53*
Surr: Dibromofluoromethane	*88.6*			**0**	*80-119*	*%REC*	*1*	*28-Dec-2020 14:53*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*28-Dec-2020 14:53*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 16:47
Surr: 2-Fluorobiphenyl	*70.4*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:47*
Surr: 4-Terphenyl-d14	*74.2*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:47*
Surr: Nitrobenzene-d5	*66.4*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:47*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW18_121520
Collection Date: 15-Dec-2020 12:20

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.0220**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:33
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:33
Arsenic	**0.000992**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:33
Barium	**0.678**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:33
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:33
Cadmium	**0.000268**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:33
Calcium	**306**		**0.340**	**0.500**	**5.00**	**mg/L**	10	31-Dec-2020 16:08
Chromium	**0.00150**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:33
Cobalt	**0.0163**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:33
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	31-Dec-2020 15:33
Iron	**0.712**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:33
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:33
Magnesium	**218**		**0.100**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:08
Manganese	**2.36**		**0.00700**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:08
Nickel	**0.0169**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:33
Potassium	**2.65**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:33
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:33
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:33
Sodium	**814**		**0.140**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:08
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:33
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:33
Zinc	**0.0173**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:33
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:57
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C03_121520
Collection Date: 15-Dec-2020 13:10

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:14
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:14
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:14
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:14
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:14
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 15:14
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:14
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:14
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:14
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 15:14
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	28-Dec-2020 15:14
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:14
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:14
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	28-Dec-2020 15:14
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 15:14
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:14
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	28-Dec-2020 15:14
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C03_121520
Collection Date: 15-Dec-2020 13:10

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:14
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	28-Dec-2020 15:14
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:14
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 15:14
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 15:14
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 15:14
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:14
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 15:14
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 15:14
Surr: 1,2-Dichloroethane-d4	*86.0*			**0**	*81-118*	*%REC*	*1*	*28-Dec-2020 15:14*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*1*	*28-Dec-2020 15:14*
Surr: Dibromofluoromethane	*86.2*			**0**	*80-119*	*%REC*	*1*	*28-Dec-2020 15:14*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*28-Dec-2020 15:14*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 16:29
Surr: 2-Fluorobiphenyl	*71.9*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:29*
Surr: 4-Terphenyl-d14	*77.5*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:29*
Surr: Nitrobenzene-d5	*74.1*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 16:29*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 15-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-10
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:11
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:11
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 14:11
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	28-Dec-2020 14:11
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:11
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	28-Dec-2020 14:11
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 14:11
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:11
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	28-Dec-2020 14:11
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 15-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120808
Lab ID:HS20120808-10
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	28-Dec-2020 14:11
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	28-Dec-2020 14:11
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	28-Dec-2020 14:11
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	28-Dec-2020 14:11
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	28-Dec-2020 14:11
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	28-Dec-2020 14:11
Surr: 1,2-Dichloroethane-d4	*88.4*			**0**	*81-118*	*%REC*	*1*	*28-Dec-2020 14:11*
Surr: 4-Bromofluorobenzene	*94.4*			**0**	*85-114*	*%REC*	*1*	*28-Dec-2020 14:11*
Surr: Dibromofluoromethane	*89.3*			**0**	*80-119*	*%REC*	*1*	*28-Dec-2020 14:11*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*28-Dec-2020 14:11*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

Batch ID: 160940 **Start Date:** 22 Dec 2020 09:00 **End Date:** 22 Dec 2020 11:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120808-01		10 (mL)	10 (mL)	1
HS20120808-03		10 (mL)	10 (mL)	1
HS20120808-04		10 (mL)	10 (mL)	1
HS20120808-05		10 (mL)	10 (mL)	1
HS20120808-06		10 (mL)	10 (mL)	1
HS20120808-07		10 (mL)	10 (mL)	1
HS20120808-08		10 (mL)	10 (mL)	1

Batch ID: 160949 **Start Date:** 22 Dec 2020 09:49 **End Date:** 22 Dec 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120808-01	1	1000 (mL)	1 (mL)	0.001
HS20120808-02	1	1000 (mL)	1 (mL)	0.001
HS20120808-03	1	1000 (mL)	1 (mL)	0.001
HS20120808-06	1	1000 (mL)	1 (mL)	0.001
HS20120808-07	1	1000 (mL)	1 (mL)	0.001
HS20120808-08	1	1000 (mL)	1 (mL)	0.001
HS20120808-09	1	1000 (mL)	1 (mL)	0.001

Batch ID: 161155 **Start Date:** 29 Dec 2020 11:00 **End Date:** 29 Dec 2020 15:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120808-01		10 (mL)	10 (mL)	1
HS20120808-03		10 (mL)	10 (mL)	1
HS20120808-04		10 (mL)	10 (mL)	1
HS20120808-05		10 (mL)	10 (mL)	1
HS20120808-06		10 (mL)	10 (mL)	1
HS20120808-07		10 (mL)	10 (mL)	1
HS20120808-08		10 (mL)	10 (mL)	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160940 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Groundwater	
HS20120808-01	AWD1_121520	15 Dec 2020 07:40		22 Dec 2020 09:00	22 Dec 2020 16:27	1
HS20120808-03	MW14_121520	15 Dec 2020 09:10		22 Dec 2020 09:00	22 Dec 2020 16:28	1
HS20120808-04	MW3_121520	15 Dec 2020 10:00		22 Dec 2020 09:00	22 Dec 2020 16:30	1
HS20120808-05	MW3_121520-a	15 Dec 2020 10:00		22 Dec 2020 09:00	22 Dec 2020 16:51	1
HS20120808-06	18CPTMW14_121520	15 Dec 2020 10:50		22 Dec 2020 09:00	22 Dec 2020 16:53	1
HS20120808-07	18WW22_121520	15 Dec 2020 11:35		22 Dec 2020 09:00	22 Dec 2020 16:55	1
HS20120808-08	18CPTMW18_121520	15 Dec 2020 12:20		22 Dec 2020 09:00	22 Dec 2020 16:57	1
Batch ID: 160949 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Groundwater	
HS20120808-01	AWD1_121520	15 Dec 2020 07:40		22 Dec 2020 09:49	30 Dec 2020 14:24	5
HS20120808-02	120_121520	15 Dec 2020 08:25		22 Dec 2020 09:49	30 Dec 2020 14:42	100
HS20120808-03	MW14_121520	15 Dec 2020 09:10		22 Dec 2020 09:49	29 Dec 2020 17:41	1
HS20120808-06	18CPTMW14_121520	15 Dec 2020 10:50		22 Dec 2020 09:49	29 Dec 2020 17:23	1
HS20120808-07	18WW22_121520	15 Dec 2020 11:35		22 Dec 2020 09:49	29 Dec 2020 17:05	1
HS20120808-08	18CPTMW18_121520	15 Dec 2020 12:20		22 Dec 2020 09:49	29 Dec 2020 16:47	1
HS20120808-09	C03_121520	15 Dec 2020 13:10		22 Dec 2020 09:49	29 Dec 2020 16:29	1
Batch ID: 161155 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20120808-01	AWD1_121520	15 Dec 2020 07:40		29 Dec 2020 15:00	31 Dec 2020 15:58	10
HS20120808-01	AWD1_121520	15 Dec 2020 07:40		29 Dec 2020 15:00	31 Dec 2020 15:14	1
HS20120808-03	MW14_121520	15 Dec 2020 09:10		29 Dec 2020 15:00	31 Dec 2020 16:00	10
HS20120808-03	MW14_121520	15 Dec 2020 09:10		29 Dec 2020 15:00	31 Dec 2020 15:16	1
HS20120808-04	MW3_121520	15 Dec 2020 10:00		29 Dec 2020 15:00	31 Dec 2020 16:02	10
HS20120808-04	MW3_121520	15 Dec 2020 10:00		29 Dec 2020 15:00	31 Dec 2020 15:25	1
HS20120808-05	MW3_121520-a	15 Dec 2020 10:00		29 Dec 2020 15:00	31 Dec 2020 16:04	10
HS20120808-05	MW3_121520-a	15 Dec 2020 10:00		29 Dec 2020 15:00	31 Dec 2020 15:27	1
HS20120808-06	18CPTMW14_121520	15 Dec 2020 10:50		29 Dec 2020 15:00	31 Dec 2020 16:06	10
HS20120808-06	18CPTMW14_121520	15 Dec 2020 10:50		29 Dec 2020 15:00	31 Dec 2020 15:29	1
HS20120808-07	18WW22_121520	15 Dec 2020 11:35		29 Dec 2020 15:00	31 Dec 2020 15:31	1
HS20120808-08	18CPTMW18_121520	15 Dec 2020 12:20		29 Dec 2020 15:00	31 Dec 2020 16:08	10
HS20120808-08	18CPTMW18_121520	15 Dec 2020 12:20		29 Dec 2020 15:00	31 Dec 2020 15:33	1
Batch ID: R375144 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120808-02	120_121520	15 Dec 2020 08:25			21 Dec 2020 20:38	100
HS20120808-02	120_121520	15 Dec 2020 08:25			21 Dec 2020 20:17	10
Batch ID: R375495 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120808-10	Trip Blank	15 Dec 2020 00:00			28 Dec 2020 14:11	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375495 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120808-03	MW14_121520	15 Dec 2020 09:10			28 Dec 2020 18:24	100
HS20120808-03	MW14_121520	15 Dec 2020 09:10			28 Dec 2020 18:03	10
HS20120808-04	MW3_121520	15 Dec 2020 10:00			28 Dec 2020 17:21	5
HS20120808-04	MW3_121520	15 Dec 2020 10:00			28 Dec 2020 15:36	1
HS20120808-05	MW3_121520-a	15 Dec 2020 10:00			28 Dec 2020 17:42	5
HS20120808-05	MW3_121520-a	15 Dec 2020 10:00			28 Dec 2020 15:57	1
HS20120808-06	18CPTMW14_121520	15 Dec 2020 10:50			28 Dec 2020 16:18	5
HS20120808-07	18WW22_121520	15 Dec 2020 11:35			28 Dec 2020 14:32	1
HS20120808-08	18CPTMW18_121520	15 Dec 2020 12:20			28 Dec 2020 14:53	1
HS20120808-09	C03_121520	15 Dec 2020 13:10			28 Dec 2020 15:14	1
Batch ID: R375718 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS20120808-01	AWD1_121520	15 Dec 2020 07:40			31 Dec 2020 12:46	1
HS20120808-02	120_121520	15 Dec 2020 08:25			31 Dec 2020 12:46	1
HS20120808-03	MW14_121520	15 Dec 2020 09:10			31 Dec 2020 12:46	1
HS20120808-04	MW3_121520	15 Dec 2020 10:00			31 Dec 2020 12:46	1
HS20120808-05	MW3_121520-a	15 Dec 2020 10:00			31 Dec 2020 12:46	1
HS20120808-06	18CPTMW14_121520	15 Dec 2020 10:50			31 Dec 2020 12:46	1
HS20120808-07	18WW22_121520	15 Dec 2020 11:35			31 Dec 2020 12:46	1
HS20120808-08	18CPTMW18_121520	15 Dec 2020 12:20			31 Dec 2020 12:46	1
HS20120808-09	C03_121520	15 Dec 2020 13:10			31 Dec 2020 12:46	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: 160940 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-160940** Units: **mg/L** Analysis Date: **22-Dec-2020 15:58**
Client ID: Run ID: **HG03_375156** SeqNo: **5893311** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-160940** Units: **mg/L** Analysis Date: **22-Dec-2020 16:00**
Client ID: Run ID: **HG03_375156** SeqNo: **5893312** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00488	0.000200	0.005	0	97.6	82 - 119				

MS Sample ID: **HS20120617-01MS** Units: **mg/L** Analysis Date: **22-Dec-2020 16:07**
Client ID: Run ID: **HG03_375156** SeqNo: **5893314** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00531	0.000200	0.005	0.000002000	106	82 - 119				

MSD Sample ID: **HS20120617-01MSD** Units: **mg/L** Analysis Date: **22-Dec-2020 16:15**
Client ID: Run ID: **HG03_375156** SeqNo: **5893477** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00534	0.000200	0.005	0	107	82 - 119	0.005310	0.563	20	

The following samples were analyzed in this batch:

HS20120808-01	HS20120808-03	HS20120808-04	HS20120808-05
HS20120808-06	HS20120808-07	HS20120808-08	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
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QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-161155** Units: **mg/L** Analysis Date: **31-Dec-2020 14:55**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906932** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.001934	0.0100								J
Antimony	0.00100	0.00500								U
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Copper	0.00250	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.0500	0.200								U
Manganese	0.001063	0.00500								J
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.0500	0.200								U
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-161155** Units: **mg/L** Analysis Date: **31-Dec-2020 14:57**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906933** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1064	0.0100	0.1	0	106	84 - 117				
Antimony	0.05013	0.00500	0.05	0	100	85 - 117				
Arsenic	0.05148	0.00500	0.05	0	103	84 - 116				
Barium	0.05058	0.00500	0.05	0	101	86 - 114				
Beryllium	0.0507	0.00200	0.05	0	101	83 - 121				
Cadmium	0.05257	0.00200	0.05	0	105	87 - 115				
Calcium	5.1	0.500	5	0	102	87 - 118				
Chromium	0.04931	0.00500	0.05	0	98.6	85 - 116				
Cobalt	0.0497	0.00500	0.05	0	99.4	86 - 115				
Copper	0.05121	0.00500	0.05	0	102	85 - 118				
Iron	4.933	0.200	5	0	98.7	87 - 118				
Lead	0.04841	0.00500	0.05	0	96.8	88 - 115				
Magnesium	5.017	0.200	5	0	100	83 - 118				
Manganese	0.04997	0.00500	0.05	0	99.9	87 - 115				
Nickel	0.04955	0.00500	0.05	0	99.1	85 - 117				
Potassium	5.197	0.200	5	0	104	87 - 115				
Selenium	0.05343	0.00500	0.05	0	107	80 - 120				
Silver	0.04949	0.00500	0.05	0	99.0	85 - 116				
Sodium	5.029	0.200	5	0	101	85 - 117				
Thallium	0.04853	0.00200	0.05	0	97.1	82 - 116				
Vanadium	0.04842	0.00500	0.05	0	96.8	86 - 115				
Zinc	0.05321	0.00500	0.05	0	106	83 - 119				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20120809-01MS** Units: **mg/L** Analysis Date: **31-Dec-2020 15:03**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906936** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1388	0.0100	0.1	0.03389	105	84 - 117				
Antimony	0.05076	0.00500	0.05	0.000707	100	85 - 117				
Arsenic	0.05625	0.00500	0.05	0.003558	105	84 - 116				
Barium	0.1124	0.00500	0.05	0.06454	95.7	86 - 114				
Beryllium	0.05295	0.00200	0.05	0.000037	106	83 - 121				
Cadmium	0.05177	0.00200	0.05	0.000132	103	87 - 115				
Calcium	23.07	0.500	5	18.74	86.5	87 - 118				S
Chromium	0.05145	0.00500	0.05	0.002001	98.9	85 - 116				
Cobalt	0.05115	0.00500	0.05	0.00012	102	86 - 115				
Copper	0.0698	0.00500	0.05	0.01922	101	85 - 118				
Iron	5.017	0.200	5	0.04634	99.4	87 - 118				
Lead	0.05033	0.00500	0.05	0.001371	97.9	88 - 115				
Magnesium	12.69	0.200	5	8.06	92.7	83 - 118				
Manganese	0.05091	0.00500	0.05	0.001519	98.8	87 - 115				
Nickel	0.05422	0.00500	0.05	0.003525	101	85 - 117				
Potassium	9.699	0.200	5	4.879	96.4	87 - 115				
Selenium	0.05249	0.00500	0.05	0.001656	102	80 - 120				
Silver	0.04775	0.00500	0.05	0.000044	95.4	85 - 116				
Sodium	150.7	0.200	5	153.5	-57.5	85 - 117				SO
Thallium	0.04934	0.00200	0.05	0.000128	98.4	82 - 116				
Vanadium	0.05906	0.00500	0.05	0.009525	99.1	86 - 115				
Zinc	0.08891	0.00500	0.05	0.0385	101	83 - 119				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20120809-01MSD** Units: **mg/L** Analysis Date: **31-Dec-2020 15:05**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906937** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1352	0.0100	0.1	0.03389	101	84 - 117	0.1388	2.62	20	
Antimony	0.05119	0.00500	0.05	0.000707	101	85 - 117	0.05076	0.842	20	
Arsenic	0.05669	0.00500	0.05	0.003558	106	84 - 116	0.05625	0.788	20	
Barium	0.1119	0.00500	0.05	0.06454	94.7	86 - 114	0.1124	0.422	20	
Beryllium	0.05276	0.00200	0.05	0.000037	105	83 - 121	0.05295	0.359	20	
Cadmium	0.05269	0.00200	0.05	0.000132	105	87 - 115	0.05177	1.75	20	
Calcium	22.75	0.500	5	18.74	80.2	87 - 118	23.07	1.37	20	S
Chromium	0.05227	0.00500	0.05	0.002001	101	85 - 116	0.05145	1.59	20	
Cobalt	0.05167	0.00500	0.05	0.00012	103	86 - 115	0.05115	1.01	20	
Copper	0.06999	0.00500	0.05	0.01922	102	85 - 118	0.0698	0.272	20	
Iron	5.093	0.200	5	0.04634	101	87 - 118	5.017	1.5	20	
Lead	0.05087	0.00500	0.05	0.001371	99.0	88 - 115	0.05033	1.07	20	
Magnesium	12.62	0.200	5	8.06	91.3	83 - 118	12.69	0.547	20	
Manganese	0.05154	0.00500	0.05	0.001519	100	87 - 115	0.05091	1.23	20	
Nickel	0.05372	0.00500	0.05	0.003525	100	85 - 117	0.05422	0.913	20	
Potassium	9.58	0.200	5	4.879	94.0	87 - 115	9.699	1.24	20	
Selenium	0.05435	0.00500	0.05	0.001656	105	80 - 120	0.05249	3.48	20	
Silver	0.04808	0.00500	0.05	0.000044	96.1	85 - 116	0.04775	0.67	20	
Sodium	148.8	0.200	5	153.5	-94.3	85 - 117	150.7	1.23	20	SO
Thallium	0.05127	0.00200	0.05	0.000128	102	82 - 116	0.04934	3.84	20	
Vanadium	0.05985	0.00500	0.05	0.009525	101	86 - 115	0.05906	1.33	20	
Zinc	0.08947	0.00500	0.05	0.0385	102	83 - 119	0.08891	0.628	20	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20120809-01PDS** Units: **mg/L** Analysis Date: **31-Dec-2020 15:07**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906938** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1302	0.0100	0.1	0.03389	96.3	80 - 120				
Antimony	0.09461	0.00500	0.1	0.000707	93.9	80 - 120				
Arsenic	0.1091	0.00500	0.1	0.003558	106	80 - 120				
Barium	0.1606	0.00500	0.1	0.06454	96.1	80 - 120				
Beryllium	0.09921	0.00200	0.1	0.000037	99.2	80 - 120				
Cadmium	0.1027	0.00200	0.1	0.000132	103	80 - 120				
Calcium	27.7	0.500	10	18.74	89.6	80 - 120				
Chromium	0.1023	0.00500	0.1	0.002001	100	80 - 120				
Cobalt	0.1031	0.00500	0.1	0.00012	103	80 - 120				
Copper	0.121	0.00500	0.1	0.01922	102	80 - 120				
Iron	10.04	0.200	10	0.04634	100.0	80 - 120				
Lead	0.1003	0.00500	0.1	0.001371	99.0	80 - 120				
Magnesium	17.81	0.200	10	8.06	97.5	80 - 120				
Manganese	0.101	0.00500	0.1	0.001519	99.5	80 - 120				
Nickel	0.1046	0.00500	0.1	0.003525	101	80 - 120				
Potassium	14.57	0.200	10	4.879	96.9	80 - 120				
Selenium	0.1068	0.00500	0.1	0.001656	105	80 - 120				
Silver	0.09372	0.00500	0.1	0.000044	93.7	80 - 120				
Sodium	153.3	0.200	10	153.5	-2.27	80 - 120				SO
Thallium	0.1007	0.00200	0.1	0.000128	101	80 - 120				
Vanadium	0.1098	0.00500	0.1	0.009525	100	80 - 120				
Zinc	0.1408	0.00500	0.1	0.0385	102	80 - 120				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20120809-01SD** Units: **mg/L** Analysis Date: **31-Dec-2020 15:01**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906935** PrepDate: **29-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.04121	0.0500					0.03389	0	10	J
Antimony	0.00500	0.0250					0.000707	0	10	U
Arsenic	0.003731	0.0250					0.003558	0	10	J
Barium	0.06435	0.0250					0.06454	0.28	10	
Beryllium	0.00250	0.0100					0.000037	0	10	U
Cadmium	0.00250	0.0100					0.000132	0	10	U
Calcium	19.29	2.50					18.74	2.93	10	
Chromium	0.002337	0.0250					0.002001	0	10	J
Cobalt	0.00250	0.0250					0.00012	0	10	U
Copper	0.01992	0.0250					0.01922	0	10	J
Iron	0.250	1.00					0.04634	0	10	U
Lead	0.00500	0.0250					0.001371	0	10	U
Magnesium	8.121	1.00					8.06	0.75	10	
Manganese	0.004506	0.0250					0.001519	0	10	J
Nickel	0.00385	0.0250					0.003525	0	10	J
Potassium	5.014	1.00					4.879	2.78	10	
Selenium	0.0125	0.0250					0.001656	0	10	U
Silver	0.00250	0.0250					0.000044	0	10	U
Sodium	153.2	1.00					153.5	0.216	10	
Thallium	0.00250	0.0100					0.000128	0	10	U
Vanadium	0.01422	0.0250					0.009525	0	10	J
Zinc	0.04142	0.0250					0.0385	7.59	10	

The following samples were analyzed in this batch:

HS20120808-01	HS20120808-03	HS20120808-04	HS20120808-05
HS20120808-06	HS20120808-07	HS20120808-08	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: 160949 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 12:49**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903679** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.0598*	*0*	*0.08*	*0*	*74.8*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07037*	*0*	*0.08*	*0*	*88.0*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.0866*	*0*	*0.08*	*0*	*108*	*40 - 140*				

LCS Sample ID: **LCS-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 13:07**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903680** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.07018	0.010	0.08	0	87.7	40 - 140				
Surr: 2-Fluorobiphenyl	*0.06536*	*0*	*0.08*	*0*	*81.7*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07812*	*0*	*0.08*	*0*	*97.6*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.06385*	*0*	*0.08*	*0*	*79.8*	*40 - 140*				

LCSD Sample ID: **LCSD-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 13:24**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903681** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.06003	0.010	0.08	0	75.0	40 - 140	0.07018	15.6	20	
Surr: 2-Fluorobiphenyl	*0.059*	*0*	*0.08*	*0*	*73.8*	*40 - 140*	*0.06536*	*10.2*	*20*	
Surr: 4-Terphenyl-d14	*0.06912*	*0*	*0.08*	*0*	*86.4*	*40 - 140*	*0.07812*	*12.2*	*20*	
Surr: Nitrobenzene-d5	*0.05554*	*0*	*0.08*	*0*	*69.4*	*40 - 140*	*0.06385*	*13.9*	*20*	

The following samples were analyzed in this batch:

HS20120808-01	HS20120808-02	HS20120808-03	HS20120808-06
HS20120808-07	HS20120808-08	HS20120808-09	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:55**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892736** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:55**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892736** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.69*	*1.0*	*50*	*0*	*91.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.14*	*1.0*	*50*	*0*	*94.3*	*85 - 114*				
Surr: Dibromofluoromethane	*44.65*	*1.0*	*50*	*0*	*89.3*	*80 - 119*				
Surr: Toluene-d8	*52.13*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:13**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.87	1.0	20	0	109	78 - 124				
1,1,1-Trichloroethane	22.16	1.0	20	0	111	74 - 131				
1,1,2,2-Tetrachloroethane	22.89	1.0	20	0	114	71 - 121				
1,1,2-Trichloroethane	22.28	1.0	20	0	111	80 - 119				
1,1-Dichloroethane	21.16	1.0	20	0	106	77 - 125				
1,1-Dichloroethene	19.04	1.0	20	0	95.2	71 - 131				
1,1-Dichloropropene	21.7	1.0	20	0	109	78 - 125				
1,2,3-Trichlorobenzene	24.69	1.0	20	0	123	69 - 129				
1,2,3-Trichloropropane	22.76	1.0	20	0	114	73 - 122				
1,2,4-Trichlorobenzene	25.56	1.0	20	0	128	69 - 130				
1,2,4-Trimethylbenzene	20.94	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	22.21	1.0	20	0	111	62 - 128				
1,2-Dibromoethane	22.19	1.0	20	0	111	77 - 121				
1,2-Dichlorobenzene	20.53	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	22.9	1.0	20	0	114	73 - 128				
1,2-Dichloropropane	23.03	1.0	20	0	115	78 - 122				
1,3,5-Trimethylbenzene	20.13	1.0	20	0	101	75 - 124				
1,3-Dichlorobenzene	21.13	1.0	20	0	106	80 - 119				
1,3-Dichloropropane	23.27	1.0	20	0	116	80 - 119				
1,4-Dichlorobenzene	21.04	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	21.81	1.0	20	0	109	60 - 139				
2-Butanone	50.69	2.0	40	0	127	56 - 143				
2-Chlorotoluene	22	1.0	20	0	110	79 - 122				
2-Hexanone	45.96	2.0	40	0	115	57 - 139				
4-Chlorotoluene	21.06	1.0	20	0	105	78 - 122				
4-Isopropyltoluene	19.44	1.0	20	0	97.2	77 - 127				
4-Methyl-2-pentanone	44.58	2.0	40	0	111	67 - 130				
Acetone	52.59	2.0	40	0	131	39 - 160				
Benzene	22.24	1.0	20	0	111	79 - 120				
Bromobenzene	22.03	1.0	20	0	110	80 - 120				
Bromochloromethane	21.68	1.0	20	0	108	78 - 123				
Bromodichloromethane	23.16	1.0	20	0	116	79 - 125				
Bromoform	22.03	1.0	20	0	110	66 - 130				
Bromomethane	23.34	1.0	20	0	117	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:13**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	47.57	2.0	40	0	119	64 - 133				
Carbon tetrachloride	22.16	1.0	20	0	111	72 - 136				
Chlorobenzene	20.91	1.0	20	0	105	82 - 118				
Chloroethane	19.19	1.0	20	0	96.0	60 - 138				
Chloroform	22.29	1.0	20	0	111	79 - 124				
Chloromethane	16.01	1.0	20	0	80.0	50 - 139				
cis-1,2-Dichloroethene	21.68	1.0	20	0	108	78 - 123				
cis-1,3-Dichloropropene	22.96	1.0	20	0	115	75 - 124				
Dibromochloromethane	22.05	1.0	20	0	110	74 - 126				
Dibromomethane	23.4	1.0	20	0	117	79 - 123				
Dichlorodifluoromethane	19.22	1.0	20	0	96.1	32 - 152				
Ethylbenzene	21.69	1.0	20	0	108	79 - 121				
Hexachlorobutadiene	22.96	1.0	20	0	115	66 - 134				
Isopropylbenzene	19.91	1.0	20	0	99.5	72 - 131				
m,p-Xylene	41.68	2.0	40	0	104	80 - 121				
Methylene chloride	22.47	2.0	20	0	112	74 - 124				
Naphthalene	23.83	1.0	20	0	119	61 - 128				
n-Butylbenzene	20.47	1.0	20	0	102	75 - 128				
n-Propylbenzene	21.46	1.0	20	0	107	76 - 126				
o-Xylene	21.34	1.0	20	0	107	78 - 122				
sec-Butylbenzene	19.78	1.0	20	0	98.9	77 - 126				
Styrene	20.68	1.0	20	0	103	78 - 123				
tert-Butylbenzene	19.4	1.0	20	0	97.0	78 - 124				
Tetrachloroethene	21.04	1.0	20	0	105	74 - 129				
Toluene	21.98	1.0	20	0	110	80 - 121				
trans-1,2-Dichloroethene	22.98	1.0	20	0	115	75 - 124				
trans-1,3-Dichloropropene	23.18	1.0	20	0	116	73 - 127				
Trichloroethene	20.96	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	19.14	1.0	20	0	95.7	65 - 141				
Vinyl chloride	19.74	1.0	20	0	98.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.83*	*1.0*	*50*	*0*	*104*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.21*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*50.01*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*51.14*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120803-01MS** Units: **ug/L** Analysis Date: **21-Dec-2020 15:43**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892744** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.14	1.0	20	0	95.7	78 - 124				
1,1,1-Trichloroethane	19.42	1.0	20	0	97.1	74 - 131				
1,1,2,2-Tetrachloroethane	19.69	1.0	20	0	98.5	71 - 121				
1,1,2-Trichloroethane	18.91	1.0	20	0	94.6	80 - 119				
1,1-Dichloroethane	18.49	1.0	20	0	92.4	77 - 125				
1,1-Dichloroethene	17.01	1.0	20	0	85.1	71 - 131				
1,1-Dichloropropene	20.64	1.0	20	0	103	78 - 125				
1,2,3-Trichlorobenzene	18.82	1.0	20	0	94.1	69 - 129				
1,2,3-Trichloropropane	19.42	1.0	20	0	97.1	73 - 122				
1,2,4-Trichlorobenzene	19.36	1.0	20	0	96.8	69 - 130				
1,2,4-Trimethylbenzene	21.1	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	19.11	1.0	20	0	95.5	62 - 128				
1,2-Dibromoethane	18.91	1.0	20	0	94.5	77 - 121				
1,2-Dichlorobenzene	19.22	1.0	20	0	96.1	80 - 119				
1,2-Dichloroethane	18.83	1.0	20	0	94.1	73 - 128				
1,2-Dichloropropane	19.38	1.0	20	0	96.9	78 - 122				
1,3,5-Trimethylbenzene	21.14	1.0	20	0	106	75 - 124				
1,3-Dichlorobenzene	19.66	1.0	20	0	98.3	80 - 119				
1,3-Dichloropropane	19.57	1.0	20	0	97.8	80 - 119				
1,4-Dichlorobenzene	20.16	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	19.05	1.0	20	0	95.3	60 - 139				
2-Butanone	36.8	2.0	40	0	92.0	56 - 143				
2-Chlorotoluene	20.92	1.0	20	0	105	79 - 122				
2-Hexanone	35.79	2.0	40	0	89.5	57 - 139				
4-Chlorotoluene	20.79	1.0	20	0	104	78 - 122				
4-Isopropyltoluene	21.93	1.0	20	0	110	77 - 127				
4-Methyl-2-pentanone	36.35	2.0	40	0	90.9	67 - 130				
Acetone	27.59	2.0	40	0	69.0	39 - 160				
Benzene	19.54	1.0	20	0	97.7	79 - 120				
Bromobenzene	20.07	1.0	20	0	100	80 - 120				
Bromochloromethane	16.96	1.0	20	0	84.8	78 - 123				
Bromodichloromethane	19.37	1.0	20	0	96.9	79 - 125				
Bromoform	19.5	1.0	20	0	97.5	66 - 130				
Bromomethane	19.78	1.0	20	0	98.9	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120803-01MS** Units: **ug/L** Analysis Date: **21-Dec-2020 15:43**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892744** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.51	2.0	40	0	93.8	64 - 133				
Carbon tetrachloride	21.84	1.0	20	0	109	72 - 136				
Chlorobenzene	19.35	1.0	20	0	96.7	82 - 118				
Chloroethane	16.83	1.0	20	0	84.2	60 - 138				
Chloroform	18.32	1.0	20	0	91.6	79 - 124				
Chloromethane	14.13	1.0	20	0	70.6	50 - 139				
cis-1,2-Dichloroethene	25.42	1.0	20	7.166	91.3	78 - 123				
cis-1,3-Dichloropropene	18.89	1.0	20	0	94.5	75 - 124				
Dibromochloromethane	18.71	1.0	20	0	93.6	74 - 126				
Dibromomethane	19.52	1.0	20	0	97.6	79 - 123				
Dichlorodifluoromethane	16.4	1.0	20	0	82.0	32 - 152				
Ethylbenzene	20.25	1.0	20	0	101	79 - 121				
Hexachlorobutadiene	23.81	1.0	20	0	119	66 - 134				
Isopropylbenzene	20.28	1.0	20	0	101	72 - 131				
m,p-Xylene	39.38	2.0	40	0	98.5	80 - 121				
Methylene chloride	17.8	2.0	20	0	89.0	74 - 124				
Naphthalene	16.71	1.0	20	0	83.6	61 - 128				
n-Butylbenzene	22.8	1.0	20	0	114	75 - 128				
n-Propylbenzene	21.19	1.0	20	0	106	76 - 126				
o-Xylene	19.48	1.0	20	0	97.4	78 - 122				
sec-Butylbenzene	22.16	1.0	20	0	111	77 - 126				
Styrene	19.31	1.0	20	0	96.6	78 - 123				
tert-Butylbenzene	21.7	1.0	20	0	109	78 - 124				
Tetrachloroethene	21.02	1.0	20	0	105	74 - 129				
Toluene	19.58	1.0	20	0	97.9	80 - 121				
trans-1,2-Dichloroethene	17.96	1.0	20	0	89.8	75 - 124				
trans-1,3-Dichloropropene	18.69	1.0	20	0	93.4	73 - 127				
Trichloroethene	22.69	1.0	20	2.069	103	79 - 123				
Trichlorofluoromethane	17.63	1.0	20	0	88.2	65 - 141				
Vinyl chloride	17.84	1.0	20	0	89.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.83*	*1.0*	*50*	*0*	*89.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.81*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*44.9*	*1.0*	*50*	*0*	*89.8*	*80 - 119*				
Surr: Toluene-d8	*50.65*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120803-01MSD** Units: **ug/L** Analysis Date: **21-Dec-2020 16:04**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.2	1.0	20	0	96.0	78 - 124	19.14	0.309	20	
1,1,1-Trichloroethane	18.1	1.0	20	0	90.5	74 - 131	19.42	7.04	20	
1,1,2,2-Tetrachloroethane	18.54	1.0	20	0	92.7	71 - 121	19.69	6.06	20	
1,1,2-Trichloroethane	18.46	1.0	20	0	92.3	80 - 119	18.91	2.4	20	
1,1-Dichloroethane	18.13	1.0	20	0	90.6	77 - 125	18.49	1.97	20	
1,1-Dichloroethene	16.34	1.0	20	0	81.7	71 - 131	17.01	3.99	20	
1,1-Dichloropropene	20.18	1.0	20	0	101	78 - 125	20.64	2.26	20	
1,2,3-Trichlorobenzene	21.37	1.0	20	0	107	69 - 129	18.82	12.7	20	
1,2,3-Trichloropropane	18.68	1.0	20	0	93.4	73 - 122	19.42	3.89	20	
1,2,4-Trichlorobenzene	20.22	1.0	20	0	101	69 - 130	19.36	4.34	20	
1,2,4-Trimethylbenzene	19.72	1.0	20	0	98.6	76 - 124	21.1	6.76	20	
1,2-Dibromo-3-chloropropane	17.98	1.0	20	0	89.9	62 - 128	19.11	6.08	20	
1,2-Dibromoethane	18.49	1.0	20	0	92.5	77 - 121	18.91	2.23	20	
1,2-Dichlorobenzene	18.54	1.0	20	0	92.7	80 - 119	19.22	3.56	20	
1,2-Dichloroethane	18.7	1.0	20	0	93.5	73 - 128	18.83	0.701	20	
1,2-Dichloropropane	18.9	1.0	20	0	94.5	78 - 122	19.38	2.54	20	
1,3,5-Trimethylbenzene	19.97	1.0	20	0	99.9	75 - 124	21.14	5.67	20	
1,3-Dichlorobenzene	18.51	1.0	20	0	92.6	80 - 119	19.66	6.04	20	
1,3-Dichloropropane	19.43	1.0	20	0	97.2	80 - 119	19.57	0.706	20	
1,4-Dichlorobenzene	18.88	1.0	20	0	94.4	79 - 118	20.16	6.55	20	
2,2-Dichloropropane	18.62	1.0	20	0	93.1	60 - 139	19.05	2.29	20	
2-Butanone	34.62	2.0	40	0	86.5	56 - 143	36.8	6.11	20	
2-Chlorotoluene	19.58	1.0	20	0	97.9	79 - 122	20.92	6.62	20	
2-Hexanone	36.29	2.0	40	0	90.7	57 - 139	35.79	1.39	20	
4-Chlorotoluene	19.54	1.0	20	0	97.7	78 - 122	20.79	6.17	20	
4-Isopropyltoluene	20.52	1.0	20	0	103	77 - 127	21.93	6.6	20	
4-Methyl-2-pentanone	37.79	2.0	40	0	94.5	67 - 130	36.35	3.89	20	
Acetone	27.58	2.0	40	0	68.9	39 - 160	27.59	0.0652	20	
Benzene	18.89	1.0	20	0	94.5	79 - 120	19.54	3.37	20	
Bromobenzene	18.88	1.0	20	0	94.4	80 - 120	20.07	6.1	20	
Bromochloromethane	17.91	1.0	20	0	89.6	78 - 123	16.96	5.43	20	
Bromodichloromethane	18.97	1.0	20	0	94.9	79 - 125	19.37	2.1	20	
Bromoform	18.99	1.0	20	0	94.9	66 - 130	19.5	2.66	20	
Bromomethane	18.04	1.0	20	0	90.2	53 - 141	19.78	9.21	20	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120803-01MSD** Units: **ug/L** Analysis Date: **21-Dec-2020 16:04**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	36.67	2.0	40	0	91.7	64 - 133	37.51	2.28	20	
Carbon tetrachloride	20.77	1.0	20	0	104	72 - 136	21.84	5.03	20	
Chlorobenzene	18.52	1.0	20	0	92.6	82 - 118	19.35	4.34	20	
Chloroethane	16.26	1.0	20	0	81.3	60 - 138	16.83	3.47	20	
Chloroform	17.76	1.0	20	0	88.8	79 - 124	18.32	3.09	20	
Chloromethane	14.05	1.0	20	0	70.2	50 - 139	14.13	0.567	20	
cis-1,2-Dichloroethene	24.84	1.0	20	7.166	88.4	78 - 123	25.42	2.31	20	
cis-1,3-Dichloropropene	18.93	1.0	20	0	94.6	75 - 124	18.89	0.195	20	
Dibromochloromethane	18.75	1.0	20	0	93.8	74 - 126	18.71	0.203	20	
Dibromomethane	18.74	1.0	20	0	93.7	79 - 123	19.52	4.09	20	
Dichlorodifluoromethane	16.24	1.0	20	0	81.2	32 - 152	16.4	0.99	20	
Ethylbenzene	19.93	1.0	20	0	99.6	79 - 121	20.25	1.62	20	
Hexachlorobutadiene	24.37	1.0	20	0	122	66 - 134	23.81	2.32	20	
Isopropylbenzene	19.97	1.0	20	0	99.9	72 - 131	20.28	1.52	20	
m,p-Xylene	39.28	2.0	40	0	98.2	80 - 121	39.38	0.261	20	
Methylene chloride	18.25	2.0	20	0	91.3	74 - 124	17.8	2.52	20	
Naphthalene	18.67	1.0	20	0	93.4	61 - 128	16.71	11.1	20	
n-Butylbenzene	21.83	1.0	20	0	109	75 - 128	22.8	4.33	20	
n-Propylbenzene	20.01	1.0	20	0	100	76 - 126	21.19	5.74	20	
o-Xylene	19.18	1.0	20	0	95.9	78 - 122	19.48	1.55	20	
sec-Butylbenzene	20.6	1.0	20	0	103	77 - 126	22.16	7.29	20	
Styrene	19.17	1.0	20	0	95.8	78 - 123	19.31	0.765	20	
tert-Butylbenzene	20.68	1.0	20	0	103	78 - 124	21.7	4.84	20	
Tetrachloroethene	20.58	1.0	20	0	103	74 - 129	21.02	2.11	20	
Toluene	19.07	1.0	20	0	95.3	80 - 121	19.58	2.65	20	
trans-1,2-Dichloroethene	18.54	1.0	20	0	92.7	75 - 124	17.96	3.2	20	
trans-1,3-Dichloropropene	18.67	1.0	20	0	93.3	73 - 127	18.69	0.112	20	
Trichloroethene	20.4	1.0	20	2.069	91.7	79 - 123	22.69	10.6	20	
Trichlorofluoromethane	16.96	1.0	20	0	84.8	65 - 141	17.63	3.91	20	
Vinyl chloride	17.01	1.0	20	0	85.1	58 - 137	17.84	4.73	20	
Surr: 1,2-Dichloroethane-d4	*45.51*	*1.0*	*50*	*0*	*91.0*	*81 - 118*	*44.83*	*1.5*	*20*	
Surr: 4-Bromofluorobenzene	*49*	*1.0*	*50*	*0*	*98.0*	*85 - 114*	*49.81*	*1.65*	*20*	
Surr: Dibromofluoromethane	*45.38*	*1.0*	*50*	*0*	*90.8*	*80 - 119*	*44.9*	*1.07*	*20*	
Surr: Toluene-d8	*50.23*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.65*	*0.831*	*20*	

ALS Houston, US Date: 31-Dec-20

Client:	Bhate Environmental Associates, Inc.
Project:	LHAAP 18 24
WorkOrder:	HS20120808

QC BATCH REPORT

Batch ID:	**R375144 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20120808-02

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201228** Units: **ug/L** Analysis Date: **28-Dec-2020 13:29**
Client ID: Run ID: **VOA6_375495** SeqNo: **5901199** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201228** Units: **ug/L** Analysis Date: **28-Dec-2020 13:29**
Client ID: Run ID: **VOA6_375495** SeqNo: **5901199** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.7*	*1.0*	*50*	*0*	*87.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.47*	*1.0*	*50*	*0*	*94.9*	*85 - 114*				
Surr: Dibromofluoromethane	*44.76*	*1.0*	*50*	*0*	*89.5*	*80 - 119*				
Surr: Toluene-d8	*52.23*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201228** Units: **ug/L** Analysis Date: **28-Dec-2020 12:47**
Client ID: Run ID: **VOA6_375495** SeqNo: **5901198** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.55	1.0	20	0	103	78 - 124				
1,1,1-Trichloroethane	20.54	1.0	20	0	103	74 - 131				
1,1,2,2-Tetrachloroethane	20.43	1.0	20	0	102	71 - 121				
1,1,2-Trichloroethane	21.12	1.0	20	0	106	80 - 119				
1,1-Dichloroethane	20.86	1.0	20	0	104	77 - 125				
1,1-Dichloroethene	19.03	1.0	20	0	95.1	71 - 131				
1,1-Dichloropropene	21.8	1.0	20	0	109	78 - 125				
1,2,3-Trichlorobenzene	22.88	1.0	20	0	114	69 - 129				
1,2,3-Trichloropropane	20.17	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	22.41	1.0	20	0	112	69 - 130				
1,2,4-Trimethylbenzene	20.82	1.0	20	0	104	76 - 124				
1,2-Dibromo-3-chloropropane	19.36	1.0	20	0	96.8	62 - 128				
1,2-Dibromoethane	20.67	1.0	20	0	103	77 - 121				
1,2-Dichlorobenzene	19.76	1.0	20	0	98.8	80 - 119				
1,2-Dichloroethane	20.17	1.0	20	0	101	73 - 128				
1,2-Dichloropropane	22.12	1.0	20	0	111	78 - 122				
1,3,5-Trimethylbenzene	20.35	1.0	20	0	102	75 - 124				
1,3-Dichlorobenzene	20.05	1.0	20	0	100	80 - 119				
1,3-Dichloropropane	21.37	1.0	20	0	107	80 - 119				
1,4-Dichlorobenzene	20.19	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	21.45	1.0	20	0	107	60 - 139				
2-Butanone	40.02	2.0	40	0	100	56 - 143				
2-Chlorotoluene	20.66	1.0	20	0	103	79 - 122				
2-Hexanone	38.17	2.0	40	0	95.4	57 - 139				
4-Chlorotoluene	20.33	1.0	20	0	102	78 - 122				
4-Isopropyltoluene	20.35	1.0	20	0	102	77 - 127				
4-Methyl-2-pentanone	38.16	2.0	40	0	95.4	67 - 130				
Acetone	41.68	2.0	40	0	104	39 - 160				
Benzene	21.09	1.0	20	0	105	79 - 120				
Bromobenzene	20.29	1.0	20	0	101	80 - 120				
Bromochloromethane	20.37	1.0	20	0	102	78 - 123				
Bromodichloromethane	21.56	1.0	20	0	108	79 - 125				
Bromoform	21.15	1.0	20	0	106	66 - 130				
Bromomethane	23.27	1.0	20	0	116	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201228** Units: **ug/L** Analysis Date: **28-Dec-2020 12:47**
Client ID: Run ID: **VOA6_375495** SeqNo: **5901198** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	45.02	2.0	40	0	113	64 - 133				
Carbon tetrachloride	22.02	1.0	20	0	110	72 - 136				
Chlorobenzene	19.91	1.0	20	0	99.6	82 - 118				
Chloroethane	19.19	1.0	20	0	95.9	60 - 138				
Chloroform	20.66	1.0	20	0	103	79 - 124				
Chloromethane	17.73	1.0	20	0	88.7	50 - 139				
cis-1,2-Dichloroethene	20.81	1.0	20	0	104	78 - 123				
cis-1,3-Dichloropropene	22.13	1.0	20	0	111	75 - 124				
Dibromochloromethane	20.41	1.0	20	0	102	74 - 126				
Dibromomethane	20.69	1.0	20	0	103	79 - 123				
Dichlorodifluoromethane	23.88	1.0	20	0	119	32 - 152				
Ethylbenzene	20.98	1.0	20	0	105	79 - 121				
Hexachlorobutadiene	24.25	1.0	20	0	121	66 - 134				
Isopropylbenzene	20.11	1.0	20	0	101	72 - 131				
m,p-Xylene	40.59	2.0	40	0	101	80 - 121				
Methylene chloride	20.84	2.0	20	0	104	74 - 124				
Naphthalene	19.89	1.0	20	0	99.4	61 - 128				
n-Butylbenzene	21.64	1.0	20	0	108	75 - 128				
n-Propylbenzene	20.66	1.0	20	0	103	76 - 126				
o-Xylene	19.94	1.0	20	0	99.7	78 - 122				
sec-Butylbenzene	20.83	1.0	20	0	104	77 - 126				
Styrene	19.98	1.0	20	0	99.9	78 - 123				
tert-Butylbenzene	20.71	1.0	20	0	104	78 - 124				
Tetrachloroethene	20.96	1.0	20	0	105	74 - 129				
Toluene	20.61	1.0	20	0	103	80 - 121				
trans-1,2-Dichloroethene	21.06	1.0	20	0	105	75 - 124				
trans-1,3-Dichloropropene	20.93	1.0	20	0	105	73 - 127				
Trichloroethene	20.13	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	18.96	1.0	20	0	94.8	65 - 141				
Vinyl chloride	19.75	1.0	20	0	98.8	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.5*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.23*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*49.24*	*1.0*	*50*	*0*	*98.5*	*80 - 119*				
Surr: Toluene-d8	*50.27*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120808-07MS** Units: **ug/L** Analysis Date: **28-Dec-2020 16:39**
Client ID: **18WW22_121520** Run ID: **VOA6_375495** SeqNo: **5901208** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.34	1.0	20	0	107	78 - 124				
1,1,1-Trichloroethane	19.88	1.0	20	0	99.4	74 - 131				
1,1,2,2-Tetrachloroethane	20.4	1.0	20	0	102	71 - 121				
1,1,2-Trichloroethane	20.46	1.0	20	0	102	80 - 119				
1,1-Dichloroethane	17.9	1.0	20	0	89.5	77 - 125				
1,1-Dichloroethene	18.77	1.0	20	0	93.8	71 - 131				
1,1-Dichloropropene	21.38	1.0	20	0	107	78 - 125				
1,2,3-Trichlorobenzene	20.63	1.0	20	0	103	69 - 129				
1,2,3-Trichloropropane	20.17	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	20.8	1.0	20	0	104	69 - 130				
1,2,4-Trimethylbenzene	22.67	1.0	20	0	113	76 - 124				
1,2-Dibromo-3-chloropropane	17.68	1.0	20	0	88.4	62 - 128				
1,2-Dibromoethane	20.35	1.0	20	0	102	77 - 121				
1,2-Dichlorobenzene	20.58	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	18.67	1.0	20	0	93.4	73 - 128				
1,2-Dichloropropane	20.08	1.0	20	0	100	78 - 122				
1,3,5-Trimethylbenzene	21.65	1.0	20	0	108	75 - 124				
1,3-Dichlorobenzene	21.09	1.0	20	0	105	80 - 119				
1,3-Dichloropropane	20.74	1.0	20	0	104	80 - 119				
1,4-Dichlorobenzene	20.94	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	19.68	1.0	20	0	98.4	60 - 139				
2-Butanone	34.22	2.0	40	0	85.6	56 - 143				
2-Chlorotoluene	23.12	1.0	20	0	116	79 - 122				
2-Hexanone	34.27	2.0	40	0	85.7	57 - 139				
4-Chlorotoluene	21.94	1.0	20	0	110	78 - 122				
4-Isopropyltoluene	22.34	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	35.42	2.0	40	0	88.6	67 - 130				
Acetone	27.75	2.0	40	0	69.4	39 - 160				
Benzene	20.34	1.0	20	0	102	79 - 120				
Bromobenzene	20.3	1.0	20	0	101	80 - 120				
Bromochloromethane	17.96	1.0	20	0	89.8	78 - 123				
Bromodichloromethane	20.36	1.0	20	0	102	79 - 125				
Bromoform	21.11	1.0	20	0	106	66 - 130				
Bromomethane	19.91	1.0	20	0	99.5	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120808-07MS** Units: **ug/L** Analysis Date: **28-Dec-2020 16:39**
Client ID: **18WW22_121520** Run ID: **VOA6_375495** SeqNo: **5901208** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.15	2.0	40	0	103	64 - 133				
Carbon tetrachloride	23.34	1.0	20	0	117	72 - 136				
Chlorobenzene	20.84	1.0	20	0	104	82 - 118				
Chloroethane	17.09	1.0	20	0	85.4	60 - 138				
Chloroform	19.04	1.0	20	0	95.2	79 - 124				
Chloromethane	14.74	1.0	20	0	73.7	50 - 139				
cis-1,2-Dichloroethene	19.1	1.0	20	0	95.5	78 - 123				
cis-1,3-Dichloropropene	19.99	1.0	20	0	100.0	75 - 124				
Dibromochloromethane	20.55	1.0	20	0	103	74 - 126				
Dibromomethane	20.34	1.0	20	0	102	79 - 123				
Dichlorodifluoromethane	17.48	1.0	20	0	87.4	32 - 152				
Ethylbenzene	22.38	1.0	20	0	112	79 - 121				
Hexachlorobutadiene	25.67	1.0	20	0	128	66 - 134				
Isopropylbenzene	22.24	1.0	20	0	111	72 - 131				
m,p-Xylene	43.03	2.0	40	0	108	80 - 121				
Methylene chloride	17.91	2.0	20	0	89.5	74 - 124				
Naphthalene	17.26	1.0	20	0	86.3	61 - 128				
n-Butylbenzene	23.45	1.0	20	0	117	75 - 128				
n-Propylbenzene	22.55	1.0	20	0	113	76 - 126				
o-Xylene	21.17	1.0	20	0	106	78 - 122				
sec-Butylbenzene	22.93	1.0	20	0	115	77 - 126				
Styrene	21.09	1.0	20	0	105	78 - 123				
tert-Butylbenzene	22.71	1.0	20	0	114	78 - 124				
Tetrachloroethene	23.83	1.0	20	0	119	74 - 129				
Toluene	21.92	1.0	20	0	110	80 - 121				
trans-1,2-Dichloroethene	18.79	1.0	20	0	93.9	75 - 124				
trans-1,3-Dichloropropene	20.34	1.0	20	0	102	73 - 127				
Trichloroethene	21.73	1.0	20	0	109	79 - 123				
Trichlorofluoromethane	19.13	1.0	20	0	95.6	65 - 141				
Vinyl chloride	19.04	1.0	20	0	95.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*40.51*	*1.0*	*50*	*0*	*81.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.51*	*1.0*	*50*	*0*	*99.0*	*85 - 114*				
Surr: Dibromofluoromethane	*43.1*	*1.0*	*50*	*0*	*86.2*	*80 - 119*				
Surr: Toluene-d8	*50.54*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120808-07MSD** Units: **ug/L** Analysis Date: **28-Dec-2020 17:00**
Client ID: **18WW22_121520** Run ID: **VOA6_375495** SeqNo: **5901209** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.2	1.0	20	0	101	78 - 124	21.34	5.46	20	
1,1,1-Trichloroethane	19.05	1.0	20	0	95.2	74 - 131	19.88	4.26	20	
1,1,2,2-Tetrachloroethane	20.82	1.0	20	0	104	71 - 121	20.4	2.06	20	
1,1,2-Trichloroethane	19.91	1.0	20	0	99.5	80 - 119	20.46	2.74	20	
1,1-Dichloroethane	17.99	1.0	20	0	90.0	77 - 125	17.9	0.507	20	
1,1-Dichloroethene	17.29	1.0	20	0	86.5	71 - 131	18.77	8.19	20	
1,1-Dichloropropene	20.69	1.0	20	0	103	78 - 125	21.38	3.27	20	
1,2,3-Trichlorobenzene	21.08	1.0	20	0	105	69 - 129	20.63	2.14	20	
1,2,3-Trichloropropane	19.87	1.0	20	0	99.4	73 - 122	20.17	1.47	20	
1,2,4-Trichlorobenzene	23.13	1.0	20	0	116	69 - 130	20.8	10.6	20	
1,2,4-Trimethylbenzene	23.12	1.0	20	0	116	76 - 124	22.67	1.97	20	
1,2-Dibromo-3-chloropropane	20.71	1.0	20	0	104	62 - 128	17.68	15.8	20	
1,2-Dibromoethane	20.21	1.0	20	0	101	77 - 121	20.35	0.725	20	
1,2-Dichlorobenzene	20.89	1.0	20	0	104	80 - 119	20.58	1.48	20	
1,2-Dichloroethane	18.54	1.0	20	0	92.7	73 - 128	18.67	0.704	20	
1,2-Dichloropropane	19.78	1.0	20	0	98.9	78 - 122	20.08	1.51	20	
1,3,5-Trimethylbenzene	22.45	1.0	20	0	112	75 - 124	21.65	3.63	20	
1,3-Dichlorobenzene	21.68	1.0	20	0	108	80 - 119	21.09	2.76	20	
1,3-Dichloropropane	20.04	1.0	20	0	100	80 - 119	20.74	3.44	20	
1,4-Dichlorobenzene	21.31	1.0	20	0	107	79 - 118	20.94	1.76	20	
2,2-Dichloropropane	18.49	1.0	20	0	92.5	60 - 139	19.68	6.26	20	
2-Butanone	32.06	2.0	40	0	80.1	56 - 143	34.22	6.54	20	
2-Chlorotoluene	23.31	1.0	20	0	117	79 - 122	23.12	0.807	20	
2-Hexanone	33.64	2.0	40	0	84.1	57 - 139	34.27	1.85	20	
4-Chlorotoluene	22.18	1.0	20	0	111	78 - 122	21.94	1.09	20	
4-Isopropyltoluene	23.15	1.0	20	0	116	77 - 127	22.34	3.56	20	
4-Methyl-2-pentanone	34.3	2.0	40	0	85.8	67 - 130	35.42	3.2	20	
Acetone	25.78	2.0	40	0	64.4	39 - 160	27.75	7.39	20	
Benzene	20.02	1.0	20	0	100	79 - 120	20.34	1.59	20	
Bromobenzene	21.3	1.0	20	0	106	80 - 120	20.3	4.81	20	
Bromochloromethane	18.26	1.0	20	0	91.3	78 - 123	17.96	1.64	20	
Bromodichloromethane	20.09	1.0	20	0	100	79 - 125	20.36	1.35	20	
Bromoform	20.76	1.0	20	0	104	66 - 130	21.11	1.65	20	
Bromomethane	18.5	1.0	20	0	92.5	53 - 141	19.91	7.35	20	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120808-07MSD** Units: **ug/L** Analysis Date: **28-Dec-2020 17:00**
Client ID: **18WW22_121520** Run ID: **VOA6_375495** SeqNo: **5901209** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	39.76	2.0	40	0	99.4	64 - 133	41.15	3.43	20	
Carbon tetrachloride	22.67	1.0	20	0	113	72 - 136	23.34	2.91	20	
Chlorobenzene	20.24	1.0	20	0	101	82 - 118	20.84	2.92	20	
Chloroethane	16.17	1.0	20	0	80.9	60 - 138	17.09	5.5	20	
Chloroform	18.56	1.0	20	0	92.8	79 - 124	19.04	2.53	20	
Chloromethane	14.68	1.0	20	0	73.4	50 - 139	14.74	0.416	20	
cis-1,2-Dichloroethene	18.66	1.0	20	0	93.3	78 - 123	19.1	2.3	20	
cis-1,3-Dichloropropene	19.92	1.0	20	0	99.6	75 - 124	19.99	0.368	20	
Dibromochloromethane	19.9	1.0	20	0	99.5	74 - 126	20.55	3.23	20	
Dibromomethane	20.52	1.0	20	0	103	79 - 123	20.34	0.87	20	
Dichlorodifluoromethane	16.92	1.0	20	0	84.6	32 - 152	17.48	3.22	20	
Ethylbenzene	21.34	1.0	20	0	107	79 - 121	22.38	4.75	20	
Hexachlorobutadiene	27.56	1.0	20	0	138	66 - 134	25.67	7.09	20	S
Isopropylbenzene	21.38	1.0	20	0	107	72 - 131	22.24	3.94	20	
m,p-Xylene	41.57	2.0	40	0	104	80 - 121	43.03	3.45	20	
Methylene chloride	17.98	2.0	20	0	89.9	74 - 124	17.91	0.405	20	
Naphthalene	19.2	1.0	20	0	96.0	61 - 128	17.26	10.7	20	
n-Butylbenzene	24.26	1.0	20	0	121	75 - 128	23.45	3.4	20	
n-Propylbenzene	23.07	1.0	20	0	115	76 - 126	22.55	2.24	20	
o-Xylene	20.91	1.0	20	0	105	78 - 122	21.17	1.25	20	
sec-Butylbenzene	23.35	1.0	20	0	117	77 - 126	22.93	1.82	20	
Styrene	20.42	1.0	20	0	102	78 - 123	21.09	3.22	20	
tert-Butylbenzene	23.26	1.0	20	0	116	78 - 124	22.71	2.42	20	
Tetrachloroethene	22.94	1.0	20	0	115	74 - 129	23.83	3.8	20	
Toluene	20.66	1.0	20	0	103	80 - 121	21.92	5.91	20	
trans-1,2-Dichloroethene	18.26	1.0	20	0	91.3	75 - 124	18.79	2.85	20	
trans-1,3-Dichloropropene	19.92	1.0	20	0	99.6	73 - 127	20.34	2.07	20	
Trichloroethene	20.43	1.0	20	0	102	79 - 123	21.73	6.16	20	
Trichlorofluoromethane	18.31	1.0	20	0	91.6	65 - 141	19.13	4.33	20	
Vinyl chloride	18.76	1.0	20	0	93.8	58 - 137	19.04	1.48	20	
Surr: 1,2-Dichloroethane-d4	*40.29*	*1.0*	*50*	*0*	*80.6*	*81 - 118*	*40.51*	*0.544*	*20*	S
Surr: 4-Bromofluorobenzene	*49.15*	*1.0*	*50*	*0*	*98.3*	*85 - 114*	*49.51*	*0.741*	*20*	
Surr: Dibromofluoromethane	*43.91*	*1.0*	*50*	*0*	*87.8*	*80 - 119*	*43.1*	*1.84*	*20*	
Surr: Toluene-d8	*50.72*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.54*	*0.348*	*20*	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120808

QC BATCH REPORT

Batch ID: R375495 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20120808-03	HS20120808-04	HS20120808-05	HS20120808-06
HS20120808-07	HS20120808-08	HS20120808-09	HS20120808-10

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: **HS20120808**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

ALS Houston, US Date: 31-Dec-20

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120808

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120808-01	AWD1_121520	Login	12/16/2020 10:04:45 AM	NDR	MET064
HS20120808-01	AWD1_121520	Login	12/16/2020 10:04:45 AM	NDR	Sub
HS20120808-01	AWD1_121520	Login	12/16/2020 10:04:45 AM	NDR	EXT135
HS20120808-01	AWD1_121520	Login	12/16/2020 10:04:45 AM	NDR	VOA082

ALS Houston, US Date: 31-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120808 **Date/Time Received:** **16-Dec-2020 10:40**

Client Name: Bhate Environmental **Received by:** **Pablo Marinez**

Completed By: */S/ Nilesh D. Ranchod* (eSignature) 16-Dec-2020 12:32 (Date/Time) **Reviewed by:** */S/ RJ Modashia* (eSignature) 16-Dec-2020 12:18 (Date/Time)

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	3.5°C/3.5°C UC/C-	IR25
Cooler(s)/Kit(s):	46630	
Date/Time sample(s) sent to storage:	12/16/2020 12:32	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: _____ of _____

Project/Phase No: NWO1312.0150

COC Number(1): _____

LIMS Number: _____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS	1, 4 - DIOXANE							Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
AWD1_121520	15DEC2020	0740	-	N		WG	3		X	X	X										
120_121520	15DEC2020	0825	-	N		WG	5	X	X		X										
MW14_121520	15DEC2020	0910	-	N		WG	6	X	X	X	X										
MW3_121520	15DEC2020	1000		N		WG	5	X	X	X											
MW3_121520_a	15DEC2020	1000		FD		WG	5	X	X	X											
18CPTMW14_121520	15DEC2020	1050	-	N		WG	6	X	X	X	X										
18MW22_121520	15DEC2020	1135	-	N		WG	6	X	X	X	X										
18CPTMW18_121520	15DEC2020	1220	-	N		WG	6	X	X	X	X										
C03_121520	15DEC2020	1310	-	N		WG	5	X	X		X										
TRIP BLANK	15DEC2020		-	TB		W	2	X													
			-																		

Sample Analysis Requested (5) | Quality Assurance Samples (6)

COMMENTS:

HS20120808

Bhate Environmental Associates, Inc.
LHAAP 18 24

Custody Transfers Prior to Receipt by Laboratory

Relinquished by (Signed)	Date	Time	Received by (signed)	Date	Time
1. [signature]	12/15/20	1730	1. [signature]	12/16/20	10:40
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: _____ Shipped No.:

Method of Shipment: _____

_____ Fed Ex _____ Airbill Number:

Analytical Lab: ALS 10450 Stanchff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

46630 3 5C IR 25 cfo

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

46630

CUSTODY SEAL

Date: 12/15/20 Time: 1430
Name: Scott Beesinger
Company: Bhate

Seal Broken By:
Date: 12/16/20

46630 DEC 16 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

46630

ORIGIN ID:SGRA (303) 587-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 25NOV20
ACTWGT: 1.00 LB MAN
CAD: 3001390/CAFE3211
DIMS: 26x14x14 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-B075073-RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8883 1319

WED - 16 DEC 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

December 30, 2020 Service Request No:E2001235

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120808

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 16, 2020
For your reference, these analyses have been assigned our service request number **E2001235.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001235
Project:	HS20120808	**Date Received:**	12/16/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Nine samples were received for analysis at ALS Environmental in Houston on 12/16/20.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000703: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits

Samples E2001235-008/-009 were analyzed at a dilution due to matrix interference with the Internal Standard at a 1x DF.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001235
Project: HS20120808

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001235-001	AWD1_121520	12/15/2020	0740
E2001235-002	120_121520	12/15/2020	0825
E2001235-003	MW14_121520	12/15/2020	0910
E2001235-004	MW3_121520	12/15/2020	1000
E2001235-005	MW3_121520_a	12/15/2020	1000
E2001235-006	18CPTMW14_121520	12/15/2020	1050
E2001235-007	18WW22_121520	12/15/2020	1135
E2001235-008	18CPTMW18_121520	12/15/2020	1220
E2001235-009	C03_121520	12/15/2020	1310

Service Request Summary

Folder #: **E2001235**
Client Name: ALS Environmental - US
Project Name: HS20120808
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/16/20
Internal Due Date: 12/31/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120808
EDD: No EDD Specified

9 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001235-001	AWD1_121520	Ground Water	12/15/20 0740	**IV**
E2001235-002	120_121520	Ground Water	12/15/20 0825	**IV**
E2001235-003	MW14_121520	Ground Water	12/15/20 0910	**IV**
E2001235-004	MW3_121520	Ground Water	12/15/20 1000	**IV**
E2001235-005	MW3_121520_a	Ground Water	12/15/20 1000	**IV**
E2001235-006	18CPTMW14_121520	Ground Water	12/15/20 1050	**IV**
E2001235-007	18WW22_121520	Ground Water	12/15/20 1135	**IV**
E2001235-008	18CPTMW18_121520	Ground Water	12/15/20 1220	**IV**
E2001235-009	C03_121520	Ground Water	12/15/20 1310	**IV**

Service Request Summary

Folder #: **E2001235**
Client Name: ALS Environmental - US
Project Name: HS20120808
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
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Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/16/20
Internal Due Date: 12/31/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120808
EDD: No EDD Specified

9 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	9	level II 12/31,level IV due 1/8

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15351**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120808
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120808-01**	**AWD1_121520**	**Groundwater**	**15 Dec 2020 07:40**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
2.	**HS20120808-02**	**120_121520**	**Groundwater**	**15 Dec 2020 08:25**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
3.	**HS20120808-03**	**MW14_121520**	**Groundwater**	**15 Dec 2020 09:10**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
4.	**HS20120808-04**	**MW3_121520**	**Groundwater**	**15 Dec 2020 10:00**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
5.	**HS20120808-05**	**MW3_121520-a**	**Groundwater**	**15 Dec 2020 10:00**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
6.	**HS20120808-06**	**18CPTMW14_121520**	**Groundwater**	**15 Dec 2020 10:50**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
7.	**HS20120808-07**	**18WW22_121520**	**Groundwater**	**15 Dec 2020 11:35**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
8.	**HS20120808-08**	**18CPTMW18_121520**	**Groundwater**	**15 Dec 2020 12:20**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
9.	**HS20120808-09**	**C03_121520**	**Groundwater**	**15 Dec 2020 13:10**

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15351**

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
Provide Level II and Level IV reports in separate pdf			31 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 12/16/20 1155

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1825

Date/Time Received: 12/16/20 Initials: CH Date/Time Logged in: 12/16/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/16/20	1154	CH	4.1	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
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F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371928 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/22/20 09:08

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001235-001	AWD1_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2001235-002	120_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2001235-003	MW14_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2001235-004	MW3_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001235-005	MW3_121520_a	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001235-006	18CPTMW14_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001235-007	18WW22_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001235-008	18CPTMW18_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001235-009	C03_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001236-001	LH18/24-SP650_120220-BIX	.01	6850/ClO4 DOD			Water	10mL	
11	E2001237-001	MW22_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001237-002	18CPTMW06_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001237-003	18CPTMW06_121420_a	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001237-004	109_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001237-005	MW21_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001237-006	18CPTMW07_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001237-007	18CPTMW24_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001237-008	18WW08_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2001237-009	AWD4_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
20	EQ2000703-01	MB		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000703-02	LCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000703-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000703-02 1.00µL EQ2000703-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001235-001	100.00µL	E2001235-002	100.00µL	E2001235-003	100.00µL	E2001235-004	100.00µL	E2001235-005	100.00µL	E2001235-006	100.00µL
E2001235-007	100.00µL	E2001235-008	100.00µL	E2001235-009	100.00µL	E2001236-001	100.00µL	E2001237-001	100.00µL	E2001237-002	100.00µL
E2001237-003	100.00µL	E2001237-004	100.00µL	E2001237-005	100.00µL	E2001237-006	100.00µL	E2001237-007	100.00µL	E2001237-008	100.00µL
E2001237-009	100.00µL	EQ2000703-01	100.00µL	EQ2000703-02	100.00µL	EQ2000703-03	100.00µL				

Preparation Information Benchsheet

Prep Run#: 371928
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 12/22/20 09:08

Preparation Steps

Step: Preparation
Started: 12/22/20 09:08
Finished: 12/22/20 14:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/22/20

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 0740
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	AWD1_121520	**Units:**	µg/L
Lab Code:	E2001235-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**25.0**		0.200	0.100	0.0500	2	12/22/20	12/29/20 14:31	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 0825
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	120_121520	**Units:**	µg/L
Lab Code:	E2001235-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**13600**		100	50.0	25.0	1000	12/22/20	12/29/20 14:46	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 0910
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	MW14_121520	**Units:**	µg/L
Lab Code:	E2001235-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**73800**		200	100	50.0	2000	12/22/20	12/29/20 14:54	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 1000
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	MW3_121520	**Units:**	µg/L
Lab Code:	E2001235-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**16200**		100	50.0	25.0	1000	12/22/20	12/29/20 15:03	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 1000
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	MW3_121520_a	**Units:**	µg/L
Lab Code:	E2001235-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**16000**		100	50.0	25.0	1000	12/22/20	12/29/20 15:10	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 1050
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	18CPTMW14_121520	**Units:**	µg/L
Lab Code:	E2001235-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**2800**		10.0	5.00	2.50	100	12/22/20	12/29/20 15:34	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 1135
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	18WW22_121520	**Units:**	µg/L
Lab Code:	E2001235-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.417**		0.100	0.0500	0.0250	1	12/22/20	12/29/20 15:42	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 1220
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	18CPTMW18_121520	**Units:**	µg/L
Lab Code:	E2001235-008	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.126**	J	0.500	0.250	0.125	5	12/22/20	12/30/20 10:59	371928	708720	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	12/15/20 1310
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	C03_121520	**Units:**	µg/L
Lab Code:	E2001235-009	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.970**	J	1.00	0.500	0.250	10	12/22/20	12/29/20 15:58	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000703-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/22/20	12/29/20 13:59	371928	708661	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20120808
Sample Matrix: Ground Water

Service Request: E2001235
Date Analyzed: 12/29/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371928

	Lab Control Sample EQ2000703-02			Duplicate Lab Control Sample EQ2000703-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0919	0.100	92	0.0968	0.100	97	84 - 119	5	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000703-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0919**	J	0.100	0.0500	0.0250	1	12/22/20	12/29/20 14:07	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001235
Project:	HS20120808	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000703-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0968**	J	0.100	0.0500	0.0250	1	12/22/20	12/29/20 14:15	371928	708661	

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December 31, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120815**

Laboratory Results for: **LHAAP 18 24**

Dear Marcia Olive,

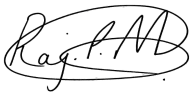
ALS Environmental received 10 sample(s) on Dec 16, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,



Generated By: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120815

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120815-01	MW22_121420	Groundwater		14-Dec-2020 07:55	16-Dec-2020 10:40	☐
HS20120815-02	18CPTMW06_121420	Groundwater		14-Dec-2020 08:40	16-Dec-2020 10:40	☐
HS20120815-03	18CPTMW06_121420_a	Groundwater		14-Dec-2020 08:40	16-Dec-2020 10:40	☐
HS20120815-04	109_121420	Groundwater		14-Dec-2020 09:35	16-Dec-2020 10:40	☐
HS20120815-05	MW21_121420	Groundwater		14-Dec-2020 10:20	16-Dec-2020 10:40	☐
HS20120815-06	18CPTMW07_121420	Groundwater		14-Dec-2020 11:05	16-Dec-2020 10:40	☐
HS20120815-07	18CPTMW24_121420	Groundwater		14-Dec-2020 11:50	16-Dec-2020 10:40	☐
HS20120815-08	18WW08_121420	Groundwater		14-Dec-2020 12:40	16-Dec-2020 10:40	☐
HS20120815-09	AWD4_121420	Groundwater		14-Dec-2020 13:30	16-Dec-2020 10:40	☐
HS20120815-10	Trip Blank	Water	Cg-102720-223	14-Dec-2020 00:00	16-Dec-2020 10:40	☐

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: LHAAP 18 24
Work Order: HS20120815

Work Order Comments

- The analysis for Perchlorate was subcontracted to our ALS Houston TX, High Resolution Lab. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160783

Sample ID: LCS-160783/LCSD-160783

- High %R for surrogates 4-Terphenyl-d14 and 2-Fluorobiphenyl. They are not associated with target compounds.

GCMS Volatiles by Method SW8260

Batch ID: R375144

Sample ID: CCV

- Acetone, 2-Butanone, 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene exceeded %D limits for CCV. Samples are ND for these compounds.

Metals by Method SW6020

Batch ID: 161155

Sample ID: HS20120809-01MS

- MS/MSD and DUPs are for an unrelated sample

Metals by Method SW7470

Batch ID: 160940

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW22_121420
Collection Date: 14-Dec-2020 07:55

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:01
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 15:01
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 15:01
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 15:01
1,2-Dichloroethane	**6.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:01
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:01
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:01
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 15:01
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 15:01
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:01
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 15:01
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 15:01
Benzene	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:01
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:01
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 15:01
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Chloroform	**3.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW22_121420
Collection Date: 14-Dec-2020 07:55

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
cis-1,2-Dichloroethene	**4.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:01
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 15:01
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 15:01
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 15:01
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:01
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:01
Tetrachloroethene	**0.70**	J	**0.30**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:01
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Trichloroethene	**420**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 16:46
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:01
Surr: 1,2-Dichloroethane-d4	*91.6*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 15:01*
Surr: 1,2-Dichloroethane-d4	*89.7*			**0**	*81-118*	*%REC*	*10*	*21-Dec-2020 16:46*
Surr: 4-Bromofluorobenzene	*96.0*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 15:01*
Surr: 4-Bromofluorobenzene	*93.9*			**0**	*85-114*	*%REC*	*10*	*21-Dec-2020 16:46*
Surr: Dibromofluoromethane	*87.8*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 15:01*
Surr: Dibromofluoromethane	*88.4*			**0**	*80-119*	*%REC*	*10*	*21-Dec-2020 16:46*
Surr: Toluene-d8	*100*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 15:01*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*10*	*21-Dec-2020 16:46*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW22_121420
Collection Date: 14-Dec-2020 07:55

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.0238**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:35
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:35
Arsenic	**0.00131**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:35
Barium	**0.819**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:35
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:35
Cadmium	**0.000318**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:35
Calcium	**88.2**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	31-Dec-2020 15:35
Chromium	**0.321**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:35
Cobalt	**0.00738**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:35
Copper	**0.00716**		**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:35
Iron	**3.13**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:35
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:35
Magnesium	**31.3**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:35
Manganese	**0.196**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:35
Nickel	**0.337**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:35
Potassium	**1.73**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:35
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:35
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:35
Sodium	**371**		**0.140**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:10
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:35
Vanadium	**0.00218**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:35
Zinc	0.00250	U	0.00200	0.00250	0.00500	mg/L	1	31-Dec-2020 15:35
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 16:58
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW06_121420
Collection Date: 14-Dec-2020 08:40

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:19
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 14:19
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 14:19
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 14:19
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:19
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:19
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 14:19
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 14:19
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:19
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 14:19
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 14:19
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:19
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 14:19
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW06_121420
Collection Date: 14-Dec-2020 08:40

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 14:19
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 14:19
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 14:19
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:19
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Trichloroethene	**1.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 14:19
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:19
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:19
Surr: 1,2-Dichloroethane-d4	*92.1*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 14:19*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 14:19*
Surr: Dibromofluoromethane	*92.1*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 14:19*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 14:19*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 18:35
Surr: 2-Fluorobiphenyl	*77.5*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 18:35*
Surr: 4-Terphenyl-d14	*92.3*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 18:35*
Surr: Nitrobenzene-d5	*71.0*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 18:35*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW06_121420_a
Collection Date: 14-Dec-2020 08:40

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:40
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 14:40
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 14:40
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 14:40
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:40
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:40
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 14:40
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 14:40
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:40
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 14:40
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 14:40
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:40
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 14:40
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW06_121420_a
Collection Date: 14-Dec-2020 08:40

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 14:40
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 14:40
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 14:40
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 14:40
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 14:40
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Trichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 14:40
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 14:40
Surr: 1,2-Dichloroethane-d4	*90.2*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 14:40*
Surr: 4-Bromofluorobenzene	*92.6*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 14:40*
Surr: Dibromofluoromethane	*88.9*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 14:40*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 14:40*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 18:53
Surr: 2-Fluorobiphenyl	*73.6*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 18:53*
Surr: 4-Terphenyl-d14	*81.0*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 18:53*
Surr: Nitrobenzene-d5	*68.4*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 18:53*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 109_121420
Collection Date: 14-Dec-2020 09:35

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,1-Dichloroethane	**0.91**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:22
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:22
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 15:22
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 15:22
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 15:22
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:22
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:22
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 15:22
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 15:22
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:22
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 15:22
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 15:22
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:22
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 15:22
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Chloroform	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 109_121420
Collection Date: 14-Dec-2020 09:35

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
cis-1,2-Dichloroethene	**120**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:22
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 15:22
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 15:22
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 15:22
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 15:22
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
trans-1,2-Dichloroethene	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 15:22
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Trichloroethene	**400**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 17:49
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 15:22
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 15:22
Surr: 1,2-Dichloroethane-d4	*95.0*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 15:22*
Surr: 1,2-Dichloroethane-d4	*88.9*			**0**	*81-118*	*%REC*	*10*	*21-Dec-2020 17:49*
Surr: 4-Bromofluorobenzene	*92.1*			**0**	*85-114*	*%REC*	*10*	*21-Dec-2020 17:49*
Surr: 4-Bromofluorobenzene	*95.4*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 15:22*
Surr: Dibromofluoromethane	*88.7*			**0**	*80-119*	*%REC*	*10*	*21-Dec-2020 17:49*
Surr: Dibromofluoromethane	*92.9*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 15:22*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*10*	*21-Dec-2020 17:49*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 15:22*
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.12**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 19:11
Surr: 2-Fluorobiphenyl	*76.3*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:11*
Surr: 4-Terphenyl-d14	*83.8*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:11*
Surr: Nitrobenzene-d5	*70.3*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:11*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.

ANALYTICAL REPORT

Project: LHAAP 18 24

WorkOrder:HS20120815

Sample ID: 109_121420

Lab ID:HS20120815-04

Collection Date: 14-Dec-2020 09:35

Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW21_121420
Collection Date: 14-Dec-2020 10:20

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
1,1,1-Trichloroethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,1,2,2-Tetrachloroethane	5.0	U	5.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,1,2-Trichloroethane	**11**		**3.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 19:35
1,1-Dichloroethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,1-Dichloroethene	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,1-Dichloropropene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
1,2,3-Trichlorobenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 19:35
1,2,3-Trichloropropane	10	U	5.0	10	10	ug/L	10	21-Dec-2020 19:35
1,2,4-Trichlorobenzene	10	U	5.0	10	10	ug/L	10	21-Dec-2020 19:35
1,2,4-Trimethylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,2-Dibromo-3-chloropropane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,2-Dibromoethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,2-Dichlorobenzene	10	U	5.0	10	10	ug/L	10	21-Dec-2020 19:35
1,2-Dichloroethane	**44**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 19:35
1,2-Dichloropropane	5.0	U	5.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,3,5-Trimethylbenzene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
1,3-Dichlorobenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 19:35
1,3-Dichloropropane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
1,4-Dichlorobenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 19:35
2,2-Dichloropropane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
2-Butanone	10	U	5.0	10	20	ug/L	10	21-Dec-2020 19:35
2-Chlorotoluene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
2-Hexanone	20	U	10	20	20	ug/L	10	21-Dec-2020 19:35
4-Chlorotoluene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 19:35
4-Isopropyltoluene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
4-Methyl-2-pentanone	20	U	7.0	20	20	ug/L	10	21-Dec-2020 19:35
Acetone	10	U	4.0	10	20	ug/L	10	21-Dec-2020 19:35
Benzene	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Bromobenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 19:35
Bromochloromethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Bromodichloromethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Bromoform	5.0	U	4.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Bromomethane	5.0	U	4.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Carbon disulfide	10	U	6.0	10	20	ug/L	10	21-Dec-2020 19:35
Carbon tetrachloride	5.0	U	5.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Chlorobenzene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
Chloroethane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Chloroform	**12**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 19:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW21_121420
Collection Date: 14-Dec-2020 10:20

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
cis-1,2-Dichloroethene	**90**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 19:35
cis-1,3-Dichloropropene	5.0	U	1.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Dibromochloromethane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Dibromomethane	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Dichlorodifluoromethane	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Ethylbenzene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
Hexachlorobutadiene	10	U	10	10	10	ug/L	10	21-Dec-2020 19:35
Isopropylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
m,p-Xylene	10	U	5.0	10	20	ug/L	10	21-Dec-2020 19:35
Methylene chloride	10	U	4.0	10	20	ug/L	10	21-Dec-2020 19:35
n-Butylbenzene	10	U	4.0	10	10	ug/L	10	21-Dec-2020 19:35
n-Propylbenzene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
Naphthalene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
o-Xylene	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
sec-Butylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Styrene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
tert-Butylbenzene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Tetrachloroethene	5.0	U	3.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Toluene	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
trans-1,2-Dichloroethene	**7.5**	J	**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 19:35
trans-1,3-Dichloropropene	5.0	U	2.0	5.0	10	ug/L	10	21-Dec-2020 19:35
Trichloroethene	**8,700**		**20**	**50**	**100**	**ug/L**	100	21-Dec-2020 19:56
Trichlorofluoromethane	10	U	3.0	10	10	ug/L	10	21-Dec-2020 19:35
Vinyl chloride	**28**		**2.0**	**5.0**	**10**	**ug/L**	10	21-Dec-2020 19:35
Surr: 1,2-Dichloroethane-d4	*84.8*			**0**	*81-118*	*%REC*	*10*	*21-Dec-2020 19:35*
Surr: 1,2-Dichloroethane-d4	*84.0*			**0**	*81-118*	*%REC*	*100*	*21-Dec-2020 19:56*
Surr: 4-Bromofluorobenzene	*93.6*			**0**	*85-114*	*%REC*	*10*	*21-Dec-2020 19:35*
Surr: 4-Bromofluorobenzene	*90.3*			**0**	*85-114*	*%REC*	*100*	*21-Dec-2020 19:56*
Surr: Dibromofluoromethane	*86.1*			**0**	*80-119*	*%REC*	*10*	*21-Dec-2020 19:35*
Surr: Dibromofluoromethane	*86.6*			**0**	*80-119*	*%REC*	*100*	*21-Dec-2020 19:56*
Surr: Toluene-d8	*100*			**0**	*89-112*	*%REC*	*10*	*21-Dec-2020 19:35*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*100*	*21-Dec-2020 19:56*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.20**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 19:29
Surr: 2-Fluorobiphenyl	*99.1*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:29*
Surr: 4-Terphenyl-d14	*135*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:29*
Surr: Nitrobenzene-d5	*96.0*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:29*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW21_121420
Collection Date: 14-Dec-2020 10:20

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.0170**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:37
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:37
Arsenic	**0.000544**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:37
Barium	**9.95**		**0.0190**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:12
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:37
Cadmium	**0.000662**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:37
Calcium	**248**		**0.340**	**0.500**	**5.00**	**mg/L**	10	31-Dec-2020 16:12
Chromium	**0.825**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:37
Cobalt	**0.0762**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:37
Copper	**0.0381**		**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:37
Iron	**8.61**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:37
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:37
Magnesium	**199**		**0.100**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:12
Manganese	**1.99**		**0.00700**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:12
Nickel	**0.861**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:37
Potassium	**2.54**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:37
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:37
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:37
Sodium	**574**		**0.140**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:12
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:37
Vanadium	**0.00385**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:37
Zinc	**0.0321**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:37
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 17:00
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW07_121420
Collection Date: 14-Dec-2020 11:05

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 19:14
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 19:14
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 19:14
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 19:14
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 19:14
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 19:14
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 19:14
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 19:14
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 19:14
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 19:14
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 19:14
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 19:14
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 19:14
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 19:14
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 19:14
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 19:14
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 19:14
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW07_121420
Collection Date: 14-Dec-2020 11:05

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 19:14
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 19:14
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 19:14
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 19:14
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 19:14
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 19:14
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 19:14
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 19:14
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Trichloroethene	**1.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 19:14
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 19:14
Surr: 1,2-Dichloroethane-d4	*86.9*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 19:14*
Surr: 4-Bromofluorobenzene	*91.0*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 19:14*
Surr: Dibromofluoromethane	*88.2*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 19:14*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 19:14*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.074**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 19:47
Surr: 2-Fluorobiphenyl	*81.4*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:47*
Surr: 4-Terphenyl-d14	*64.9*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:47*
Surr: Nitrobenzene-d5	*71.8*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 19:47*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW24_121420
Collection Date: 14-Dec-2020 11:50

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:10
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:10
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:10
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:10
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:10
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:10
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:10
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 18:10
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 18:10
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:10
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 18:10
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 18:10
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:10
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 18:10
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW24_121420
Collection Date: 14-Dec-2020 11:50

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
cis-1,2-Dichloroethene	**20**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 18:10
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 18:10
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 18:10
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 18:10
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:10
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:10
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Trichloroethene	**6.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 18:10
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:10
Vinyl chloride	**9.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 18:10
Surr: 1,2-Dichloroethane-d4	*89.5*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 18:10*
Surr: 4-Bromofluorobenzene	*92.6*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 18:10*
Surr: Dibromofluoromethane	*90.1*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 18:10*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 18:10*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 20:05
Surr: 2-Fluorobiphenyl	*75.4*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:05*
Surr: 4-Terphenyl-d14	*82.9*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:05*
Surr: Nitrobenzene-d5	*75.1*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:05*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW24_121420
Collection Date: 14-Dec-2020 11:50

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**0.0443**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	31-Dec-2020 15:39
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:39
Arsenic	**0.00649**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:39
Barium	**9.76**		**0.0190**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:14
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:39
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:39
Calcium	**381**		**0.340**	**0.500**	**5.00**	**mg/L**	10	31-Dec-2020 16:14
Chromium	**0.00112**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:39
Cobalt	**0.00295**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:39
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	31-Dec-2020 15:39
Iron	**6.97**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:39
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	31-Dec-2020 15:39
Magnesium	**248**		**0.100**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:14
Manganese	**0.514**		**0.00700**	**0.0250**	**0.0500**	**mg/L**	10	31-Dec-2020 16:14
Nickel	**0.00834**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:39
Potassium	**2.17**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:39
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:39
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:39
Sodium	**943**		**0.140**	**0.500**	**2.00**	**mg/L**	10	31-Dec-2020 16:14
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:39
Vanadium	**0.000913**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:39
Zinc	**0.00725**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:39
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	22-Dec-2020 17:02
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW08_121420
Collection Date: 14-Dec-2020 12:40

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:32
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:32
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:32
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:32
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:32
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:32
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 18:32
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 18:32
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:32
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 18:32
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 18:32
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:32
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 18:32
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW08_121420
Collection Date: 14-Dec-2020 12:40

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
cis-1,2-Dichloroethene	**1.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 18:32
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 18:32
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 18:32
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 18:32
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:32
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Trichloroethene	**3.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-Dec-2020 18:32
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:32
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:32
Surr: 1,2-Dichloroethane-d4	*90.1*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 18:32*
Surr: 4-Bromofluorobenzene	*93.3*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 18:32*
Surr: Dibromofluoromethane	*92.4*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 18:32*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 18:32*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.11**		**0.010**	**0.010**	**0.010**	**ug/L**	1	29-Dec-2020 20:23
Surr: 2-Fluorobiphenyl	*76.2*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:23*
Surr: 4-Terphenyl-d14	*89.6*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:23*
Surr: Nitrobenzene-d5	*73.7*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:23*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD4_121420
Collection Date: 14-Dec-2020 13:30

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:53
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:53
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:53
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 18:53
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:53
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:53
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:53
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 18:53
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 18:53
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:53
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 18:53
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 18:53
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:53
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 18:53
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD4_121420
Collection Date: 14-Dec-2020 13:30

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 18:53
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 18:53
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 18:53
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 18:53
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 18:53
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 18:53
Surr: 1,2-Dichloroethane-d4	*87.7*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 18:53*
Surr: 4-Bromofluorobenzene	*92.9*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 18:53*
Surr: Dibromofluoromethane	*88.7*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 18:53*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 18:53*
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 17-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	29-Dec-2020 20:41
Surr: 2-Fluorobiphenyl	*124*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:41*
Surr: 4-Terphenyl-d14	*132*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:41*
Surr: Nitrobenzene-d5	*110*			**0**	*40-140*	*%REC*	*1*	*29-Dec-2020 20:41*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: AWD4_121420
Collection Date: 14-Dec-2020 13:30

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 29-Dec-2020		Analyst: JHD
Aluminum	**6.79**		**0.0180**	**0.0500**	**0.100**	**mg/L**	10	31-Dec-2020 16:20
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	31-Dec-2020 15:41
Arsenic	**0.00134**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Barium	**0.215**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Beryllium	**0.000367**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	31-Dec-2020 15:41
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:41
Calcium	**8.08**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	31-Dec-2020 15:41
Chromium	**0.512**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Cobalt	**0.00817**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Copper	**0.0103**		**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Iron	**9.12**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:41
Lead	**0.00284**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Magnesium	**5.61**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:41
Manganese	**0.0702**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Nickel	**0.228**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Potassium	**0.899**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:41
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	31-Dec-2020 15:41
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	31-Dec-2020 15:41
Sodium	**45.1**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	31-Dec-2020 15:41
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	31-Dec-2020 15:41
Vanadium	**0.0168**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
Zinc	**0.0252**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	31-Dec-2020 15:41
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 22-Dec-2020		Analyst: JC
Mercury	**0.000124**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	22-Dec-2020 17:03
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 14-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-10
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:37
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:37
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 13:37
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-Dec-2020 13:37
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:37
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-Dec-2020 13:37
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 13:37
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:37
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	21-Dec-2020 13:37
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 14-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120815
Lab ID:HS20120815-10
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-Dec-2020 13:37
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-Dec-2020 13:37
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	21-Dec-2020 13:37
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-Dec-2020 13:37
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-Dec-2020 13:37
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-Dec-2020 13:37
Surr: 1,2-Dichloroethane-d4	*89.0*			**0**	*81-118*	*%REC*	*1*	*21-Dec-2020 13:37*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*1*	*21-Dec-2020 13:37*
Surr: Dibromofluoromethane	*90.6*			**0**	*80-119*	*%REC*	*1*	*21-Dec-2020 13:37*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*21-Dec-2020 13:37*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 31-Dec-20

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

Batch ID: 160783 **Start Date:** 17 Dec 2020 07:00 **End Date:** 17 Dec 2020 14:00
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120815-02	1	1000 (mL)	1 (mL)	0.001
HS20120815-03	1	1000 (mL)	1 (mL)	0.001
HS20120815-04	1	1000 (mL)	1 (mL)	0.001
HS20120815-05	1	1000 (mL)	1 (mL)	0.001
HS20120815-06	1	1000 (mL)	1 (mL)	0.001
HS20120815-07	1	1000 (mL)	1 (mL)	0.001
HS20120815-08	1	1000 (mL)	1 (mL)	0.001
HS20120815-09	1	1000 (mL)	1 (mL)	0.001

Batch ID: 160940 **Start Date:** 22 Dec 2020 09:00 **End Date:** 22 Dec 2020 11:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120815-01		10 (mL)	10 (mL)	1
HS20120815-05		10 (mL)	10 (mL)	1
HS20120815-07		10 (mL)	10 (mL)	1
HS20120815-09		10 (mL)	10 (mL)	1

Batch ID: 161155 **Start Date:** 29 Dec 2020 11:00 **End Date:** 29 Dec 2020 15:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120815-01		10 (mL)	10 (mL)	1
HS20120815-05		10 (mL)	10 (mL)	1
HS20120815-07		10 (mL)	10 (mL)	1
HS20120815-09		10 (mL)	10 (mL)	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160783 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Groundwater	
HS20120815-02	18CPTMW06_121420	14 Dec 2020 08:40		17 Dec 2020 08:37	29 Dec 2020 18:35	1
HS20120815-03	18CPTMW06_121420_a	14 Dec 2020 08:40		17 Dec 2020 08:37	29 Dec 2020 18:53	1
HS20120815-04	109_121420	14 Dec 2020 09:35		17 Dec 2020 08:37	29 Dec 2020 19:11	1
HS20120815-05	MW21_121420	14 Dec 2020 10:20		17 Dec 2020 08:37	29 Dec 2020 19:29	1
HS20120815-06	18CPTMW07_121420	14 Dec 2020 11:05		17 Dec 2020 08:37	29 Dec 2020 19:47	1
HS20120815-07	18CPTMW24_121420	14 Dec 2020 11:50		17 Dec 2020 08:37	29 Dec 2020 20:05	1
HS20120815-08	18WW08_121420	14 Dec 2020 12:40		17 Dec 2020 08:37	29 Dec 2020 20:23	1
HS20120815-09	AWD4_121420	14 Dec 2020 13:30		17 Dec 2020 08:37	29 Dec 2020 20:41	1
Batch ID: 160940 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Groundwater	
HS20120815-01	MW22_121420	14 Dec 2020 07:55		22 Dec 2020 09:00	22 Dec 2020 16:58	1
HS20120815-05	MW21_121420	14 Dec 2020 10:20		22 Dec 2020 09:00	22 Dec 2020 17:00	1
HS20120815-07	18CPTMW24_121420	14 Dec 2020 11:50		22 Dec 2020 09:00	22 Dec 2020 17:02	1
HS20120815-09	AWD4_121420	14 Dec 2020 13:30		22 Dec 2020 09:00	22 Dec 2020 17:03	1
Batch ID: 161155 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20120815-01	MW22_121420	14 Dec 2020 07:55		29 Dec 2020 15:00	31 Dec 2020 16:10	10
HS20120815-01	MW22_121420	14 Dec 2020 07:55		29 Dec 2020 15:00	31 Dec 2020 15:35	1
HS20120815-05	MW21_121420	14 Dec 2020 10:20		29 Dec 2020 15:00	31 Dec 2020 16:12	10
HS20120815-05	MW21_121420	14 Dec 2020 10:20		29 Dec 2020 15:00	31 Dec 2020 15:37	1
HS20120815-07	18CPTMW24_121420	14 Dec 2020 11:50		29 Dec 2020 15:00	31 Dec 2020 16:14	10
HS20120815-07	18CPTMW24_121420	14 Dec 2020 11:50		29 Dec 2020 15:00	31 Dec 2020 15:39	1
HS20120815-09	AWD4_121420	14 Dec 2020 13:30		29 Dec 2020 15:00	31 Dec 2020 16:20	10
HS20120815-09	AWD4_121420	14 Dec 2020 13:30		29 Dec 2020 15:00	31 Dec 2020 15:41	1
Batch ID: R375144 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120815-10	Trip Blank	14 Dec 2020 00:00			21 Dec 2020 13:37	1
Batch ID: R375144 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120815-01	MW22_121420	14 Dec 2020 07:55			21 Dec 2020 16:46	10
HS20120815-01	MW22_121420	14 Dec 2020 07:55			21 Dec 2020 15:01	1
HS20120815-02	18CPTMW06_121420	14 Dec 2020 08:40			21 Dec 2020 14:19	1
HS20120815-03	18CPTMW06_121420_a	14 Dec 2020 08:40			21 Dec 2020 14:40	1
HS20120815-04	109_121420	14 Dec 2020 09:35			21 Dec 2020 17:49	10
HS20120815-04	109_121420	14 Dec 2020 09:35			21 Dec 2020 15:22	1
HS20120815-05	MW21_121420	14 Dec 2020 10:20			21 Dec 2020 19:56	100
HS20120815-05	MW21_121420	14 Dec 2020 10:20			21 Dec 2020 19:35	10
HS20120815-06	18CPTMW07_121420	14 Dec 2020 11:05			21 Dec 2020 19:14	1
HS20120815-07	18CPTMW24_121420	14 Dec 2020 11:50			21 Dec 2020 18:10	1
HS20120815-08	18WW08_121420	14 Dec 2020 12:40			21 Dec 2020 18:32	1
HS20120815-09	AWD4_121420	14 Dec 2020 13:30			21 Dec 2020 18:53	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375718 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS20120815-01	MW22_121420	14 Dec 2020 07:55			31 Dec 2020 12:46	1
HS20120815-02	18CPTMW06_121420	14 Dec 2020 08:40			31 Dec 2020 12:46	1
HS20120815-03	18CPTMW06_121420_a	14 Dec 2020 08:40			31 Dec 2020 12:46	1
HS20120815-04	109_121420	14 Dec 2020 09:35			31 Dec 2020 12:46	1
HS20120815-05	MW21_121420	14 Dec 2020 10:20			31 Dec 2020 12:46	1
HS20120815-06	18CPTMW07_121420	14 Dec 2020 11:05			31 Dec 2020 12:46	1
HS20120815-07	18CPTMW24_121420	14 Dec 2020 11:50			31 Dec 2020 12:46	1
HS20120815-08	18WW08_121420	14 Dec 2020 12:40			31 Dec 2020 12:46	1
HS20120815-09	AWD4_121420	14 Dec 2020 13:30			31 Dec 2020 12:46	1

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: 160940 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-160940** Units: **mg/L** Analysis Date: **22-Dec-2020 15:58**
Client ID: Run ID: **HG03_375156** SeqNo: **5893311** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-160940** Units: **mg/L** Analysis Date: **22-Dec-2020 16:00**
Client ID: Run ID: **HG03_375156** SeqNo: **5893312** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00488	0.000200	0.005	0	97.6	82 - 119				

MS Sample ID: **HS20120617-01MS** Units: **mg/L** Analysis Date: **22-Dec-2020 16:07**
Client ID: Run ID: **HG03_375156** SeqNo: **5893314** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00531	0.000200	0.005	0.000002000	106	82 - 119				

MSD Sample ID: **HS20120617-01MSD** Units: **mg/L** Analysis Date: **22-Dec-2020 16:15**
Client ID: Run ID: **HG03_375156** SeqNo: **5893477** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00534	0.000200	0.005	0	107	82 - 119	0.005310	0.563	20	

The following samples were analyzed in this batch: HS20120815-01 HS20120815-05 HS20120815-07 HS20120815-09

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-161155** Units: **mg/L** Analysis Date: **31-Dec-2020 14:55**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906932** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.001934	0.0100								J
Antimony	0.00100	0.00500								U
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Copper	0.00250	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.0500	0.200								U
Manganese	0.001063	0.00500								J
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.0500	0.200								U
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-161155** Units: **mg/L** Analysis Date: **31-Dec-2020 14:57**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906933** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1064	0.0100	0.1	0	106	84 - 117				
Antimony	0.05013	0.00500	0.05	0	100	85 - 117				
Arsenic	0.05148	0.00500	0.05	0	103	84 - 116				
Barium	0.05058	0.00500	0.05	0	101	86 - 114				
Beryllium	0.0507	0.00200	0.05	0	101	83 - 121				
Cadmium	0.05257	0.00200	0.05	0	105	87 - 115				
Calcium	5.1	0.500	5	0	102	87 - 118				
Chromium	0.04931	0.00500	0.05	0	98.6	85 - 116				
Cobalt	0.0497	0.00500	0.05	0	99.4	86 - 115				
Copper	0.05121	0.00500	0.05	0	102	85 - 118				
Iron	4.933	0.200	5	0	98.7	87 - 118				
Lead	0.04841	0.00500	0.05	0	96.8	88 - 115				
Magnesium	5.017	0.200	5	0	100	83 - 118				
Manganese	0.04997	0.00500	0.05	0	99.9	87 - 115				
Nickel	0.04955	0.00500	0.05	0	99.1	85 - 117				
Potassium	5.197	0.200	5	0	104	87 - 115				
Selenium	0.05343	0.00500	0.05	0	107	80 - 120				
Silver	0.04949	0.00500	0.05	0	99.0	85 - 116				
Sodium	5.029	0.200	5	0	101	85 - 117				
Thallium	0.04853	0.00200	0.05	0	97.1	82 - 116				
Vanadium	0.04842	0.00500	0.05	0	96.8	86 - 115				
Zinc	0.05321	0.00500	0.05	0	106	83 - 119				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20120809-01MS** Units: **mg/L** Analysis Date: **31-Dec-2020 15:03**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906936** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1388	0.0100	0.1	0.03389	105	84 - 117				
Antimony	0.05076	0.00500	0.05	0.000707	100	85 - 117				
Arsenic	0.05625	0.00500	0.05	0.003558	105	84 - 116				
Barium	0.1124	0.00500	0.05	0.06454	95.7	86 - 114				
Beryllium	0.05295	0.00200	0.05	0.000037	106	83 - 121				
Cadmium	0.05177	0.00200	0.05	0.000132	103	87 - 115				
Calcium	23.07	0.500	5	18.74	86.5	87 - 118				S
Chromium	0.05145	0.00500	0.05	0.002001	98.9	85 - 116				
Cobalt	0.05115	0.00500	0.05	0.00012	102	86 - 115				
Copper	0.0698	0.00500	0.05	0.01922	101	85 - 118				
Iron	5.017	0.200	5	0.04634	99.4	87 - 118				
Lead	0.05033	0.00500	0.05	0.001371	97.9	88 - 115				
Magnesium	12.69	0.200	5	8.06	92.7	83 - 118				
Manganese	0.05091	0.00500	0.05	0.001519	98.8	87 - 115				
Nickel	0.05422	0.00500	0.05	0.003525	101	85 - 117				
Potassium	9.699	0.200	5	4.879	96.4	87 - 115				
Selenium	0.05249	0.00500	0.05	0.001656	102	80 - 120				
Silver	0.04775	0.00500	0.05	0.000044	95.4	85 - 116				
Sodium	150.7	0.200	5	153.5	-57.5	85 - 117				SO
Thallium	0.04934	0.00200	0.05	0.000128	98.4	82 - 116				
Vanadium	0.05906	0.00500	0.05	0.009525	99.1	86 - 115				
Zinc	0.08891	0.00500	0.05	0.0385	101	83 - 119				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20120809-01MSD** Units: **mg/L** Analysis Date: **31-Dec-2020 15:05**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906937** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1352	0.0100	0.1	0.03389	101	84 - 117	0.1388	2.62	20	
Antimony	0.05119	0.00500	0.05	0.000707	101	85 - 117	0.05076	0.842	20	
Arsenic	0.05669	0.00500	0.05	0.003558	106	84 - 116	0.05625	0.788	20	
Barium	0.1119	0.00500	0.05	0.06454	94.7	86 - 114	0.1124	0.422	20	
Beryllium	0.05276	0.00200	0.05	0.000037	105	83 - 121	0.05295	0.359	20	
Cadmium	0.05269	0.00200	0.05	0.000132	105	87 - 115	0.05177	1.75	20	
Calcium	22.75	0.500	5	18.74	80.2	87 - 118	23.07	1.37	20	S
Chromium	0.05227	0.00500	0.05	0.002001	101	85 - 116	0.05145	1.59	20	
Cobalt	0.05167	0.00500	0.05	0.00012	103	86 - 115	0.05115	1.01	20	
Copper	0.06999	0.00500	0.05	0.01922	102	85 - 118	0.0698	0.272	20	
Iron	5.093	0.200	5	0.04634	101	87 - 118	5.017	1.5	20	
Lead	0.05087	0.00500	0.05	0.001371	99.0	88 - 115	0.05033	1.07	20	
Magnesium	12.62	0.200	5	8.06	91.3	83 - 118	12.69	0.547	20	
Manganese	0.05154	0.00500	0.05	0.001519	100	87 - 115	0.05091	1.23	20	
Nickel	0.05372	0.00500	0.05	0.003525	100	85 - 117	0.05422	0.913	20	
Potassium	9.58	0.200	5	4.879	94.0	87 - 115	9.699	1.24	20	
Selenium	0.05435	0.00500	0.05	0.001656	105	80 - 120	0.05249	3.48	20	
Silver	0.04808	0.00500	0.05	0.000044	96.1	85 - 116	0.04775	0.67	20	
Sodium	148.8	0.200	5	153.5	-94.3	85 - 117	150.7	1.23	20	SO
Thallium	0.05127	0.00200	0.05	0.000128	102	82 - 116	0.04934	3.84	20	
Vanadium	0.05985	0.00500	0.05	0.009525	101	86 - 115	0.05906	1.33	20	
Zinc	0.08947	0.00500	0.05	0.0385	102	83 - 119	0.08891	0.628	20	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20120809-01PDS** Units: **mg/L** Analysis Date: **31-Dec-2020 15:07**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906938** PrepDate: **29-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1302	0.0100	0.1	0.03389	96.3	80 - 120				
Antimony	0.09461	0.00500	0.1	0.000707	93.9	80 - 120				
Arsenic	0.1091	0.00500	0.1	0.003558	106	80 - 120				
Barium	0.1606	0.00500	0.1	0.06454	96.1	80 - 120				
Beryllium	0.09921	0.00200	0.1	0.000037	99.2	80 - 120				
Cadmium	0.1027	0.00200	0.1	0.000132	103	80 - 120				
Calcium	27.7	0.500	10	18.74	89.6	80 - 120				
Chromium	0.1023	0.00500	0.1	0.002001	100	80 - 120				
Cobalt	0.1031	0.00500	0.1	0.00012	103	80 - 120				
Copper	0.121	0.00500	0.1	0.01922	102	80 - 120				
Iron	10.04	0.200	10	0.04634	100.0	80 - 120				
Lead	0.1003	0.00500	0.1	0.001371	99.0	80 - 120				
Magnesium	17.81	0.200	10	8.06	97.5	80 - 120				
Manganese	0.101	0.00500	0.1	0.001519	99.5	80 - 120				
Nickel	0.1046	0.00500	0.1	0.003525	101	80 - 120				
Potassium	14.57	0.200	10	4.879	96.9	80 - 120				
Selenium	0.1068	0.00500	0.1	0.001656	105	80 - 120				
Silver	0.09372	0.00500	0.1	0.000044	93.7	80 - 120				
Sodium	153.3	0.200	10	153.5	-2.27	80 - 120				SO
Thallium	0.1007	0.00200	0.1	0.000128	101	80 - 120				
Vanadium	0.1098	0.00500	0.1	0.009525	100	80 - 120				
Zinc	0.1408	0.00500	0.1	0.0385	102	80 - 120				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: 161155 (0) **Instrument: ICPMS04** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20120809-01SD** Units: **mg/L** Analysis Date: **31-Dec-2020 15:01**
Client ID: Run ID: **ICPMS04_375745** SeqNo: **5906935** PrepDate: **29-Dec-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.04121	0.0500					0.03389	0	10	J
Antimony	0.00500	0.0250					0.000707	0	10	U
Arsenic	0.003731	0.0250					0.003558	0	10	J
Barium	0.06435	0.0250					0.06454	0.28	10	
Beryllium	0.00250	0.0100					0.000037	0	10	U
Cadmium	0.00250	0.0100					0.000132	0	10	U
Calcium	19.29	2.50					18.74	2.93	10	
Chromium	0.002337	0.0250					0.002001	0	10	J
Cobalt	0.00250	0.0250					0.00012	0	10	U
Copper	0.01992	0.0250					0.01922	0	10	J
Iron	0.250	1.00					0.04634	0	10	U
Lead	0.00500	0.0250					0.001371	0	10	U
Magnesium	8.121	1.00					8.06	0.75	10	
Manganese	0.004506	0.0250					0.001519	0	10	J
Nickel	0.00385	0.0250					0.003525	0	10	J
Potassium	5.014	1.00					4.879	2.78	10	
Selenium	0.0125	0.0250					0.001656	0	10	U
Silver	0.00250	0.0250					0.000044	0	10	U
Sodium	153.2	1.00					153.5	0.216	10	
Thallium	0.00250	0.0100					0.000128	0	10	U
Vanadium	0.01422	0.0250					0.009525	0	10	J
Zinc	0.04142	0.0250					0.0385	7.59	10	

The following samples were analyzed in this batch: HS20120815-01 HS20120815-05 HS20120815-07 HS20120815-09

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: 160783 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160783** Units: **ug/L** Analysis Date: **29-Dec-2020 11:55**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903676** PrepDate: **17-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.05437*	*0*	*0.08*	*0*	*68.0*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.09333*	*0*	*0.08*	*0*	*117*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.05598*	*0*	*0.08*	*0*	*70.0*	*40 - 140*				

LCS Sample ID: **LCS-160783** Units: **ug/L** Analysis Date: **29-Dec-2020 12:13**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903677** PrepDate: **17-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.07237	0.010	0.08	0	90.5	40 - 140				
Surr: 2-Fluorobiphenyl	*0.1128*	*0*	*0.08*	*0*	*141*	*40 - 140*				S
Surr: 4-Terphenyl-d14	*0.1397*	*0*	*0.08*	*0*	*175*	*40 - 140*				S
Surr: Nitrobenzene-d5	*0.09458*	*0*	*0.08*	*0*	*118*	*40 - 140*				

LCSD Sample ID: **LCSD-160783** Units: **ug/L** Analysis Date: **29-Dec-2020 12:31**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903678** PrepDate: **17-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.07525	0.010	0.08	0	94.1	40 - 140	0.07237	3.91	20	
Surr: 2-Fluorobiphenyl	*0.1118*	*0*	*0.08*	*0*	*140*	*40 - 140*	*0.1128*	*0.912*	*20*	
Surr: 4-Terphenyl-d14	*0.1422*	*0*	*0.08*	*0*	*178*	*40 - 140*	*0.1397*	*1.78*	*20*	S
Surr: Nitrobenzene-d5	*0.07128*	*0*	*0.08*	*0*	*89.1*	*40 - 140*	*0.09458*	*28.1*	*20*	R

The following samples were analyzed in this batch:

HS20120815-02	HS20120815-03	HS20120815-04	HS20120815-05
HS20120815-06	HS20120815-07	HS20120815-08	HS20120815-09

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:55**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892736** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:55**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892736** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.69*	*1.0*	*50*	*0*	*91.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.14*	*1.0*	*50*	*0*	*94.3*	*85 - 114*				
Surr: Dibromofluoromethane	*44.65*	*1.0*	*50*	*0*	*89.3*	*80 - 119*				
Surr: Toluene-d8	*52.13*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:13**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.87	1.0	20	0	109	78 - 124				
1,1,1-Trichloroethane	22.16	1.0	20	0	111	74 - 131				
1,1,2,2-Tetrachloroethane	22.89	1.0	20	0	114	71 - 121				
1,1,2-Trichloroethane	22.28	1.0	20	0	111	80 - 119				
1,1-Dichloroethane	21.16	1.0	20	0	106	77 - 125				
1,1-Dichloroethene	19.04	1.0	20	0	95.2	71 - 131				
1,1-Dichloropropene	21.7	1.0	20	0	109	78 - 125				
1,2,3-Trichlorobenzene	24.69	1.0	20	0	123	69 - 129				
1,2,3-Trichloropropane	22.76	1.0	20	0	114	73 - 122				
1,2,4-Trichlorobenzene	25.56	1.0	20	0	128	69 - 130				
1,2,4-Trimethylbenzene	20.94	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	22.21	1.0	20	0	111	62 - 128				
1,2-Dibromoethane	22.19	1.0	20	0	111	77 - 121				
1,2-Dichlorobenzene	20.53	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	22.9	1.0	20	0	114	73 - 128				
1,2-Dichloropropane	23.03	1.0	20	0	115	78 - 122				
1,3,5-Trimethylbenzene	20.13	1.0	20	0	101	75 - 124				
1,3-Dichlorobenzene	21.13	1.0	20	0	106	80 - 119				
1,3-Dichloropropane	23.27	1.0	20	0	116	80 - 119				
1,4-Dichlorobenzene	21.04	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	21.81	1.0	20	0	109	60 - 139				
2-Butanone	50.69	2.0	40	0	127	56 - 143				
2-Chlorotoluene	22	1.0	20	0	110	79 - 122				
2-Hexanone	45.96	2.0	40	0	115	57 - 139				
4-Chlorotoluene	21.06	1.0	20	0	105	78 - 122				
4-Isopropyltoluene	19.44	1.0	20	0	97.2	77 - 127				
4-Methyl-2-pentanone	44.58	2.0	40	0	111	67 - 130				
Acetone	52.59	2.0	40	0	131	39 - 160				
Benzene	22.24	1.0	20	0	111	79 - 120				
Bromobenzene	22.03	1.0	20	0	110	80 - 120				
Bromochloromethane	21.68	1.0	20	0	108	78 - 123				
Bromodichloromethane	23.16	1.0	20	0	116	79 - 125				
Bromoform	22.03	1.0	20	0	110	66 - 130				
Bromomethane	23.34	1.0	20	0	117	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201221** Units: **ug/L** Analysis Date: **21-Dec-2020 12:13**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892735** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	47.57	2.0	40	0	119	64 - 133				
Carbon tetrachloride	22.16	1.0	20	0	111	72 - 136				
Chlorobenzene	20.91	1.0	20	0	105	82 - 118				
Chloroethane	19.19	1.0	20	0	96.0	60 - 138				
Chloroform	22.29	1.0	20	0	111	79 - 124				
Chloromethane	16.01	1.0	20	0	80.0	50 - 139				
cis-1,2-Dichloroethene	21.68	1.0	20	0	108	78 - 123				
cis-1,3-Dichloropropene	22.96	1.0	20	0	115	75 - 124				
Dibromochloromethane	22.05	1.0	20	0	110	74 - 126				
Dibromomethane	23.4	1.0	20	0	117	79 - 123				
Dichlorodifluoromethane	19.22	1.0	20	0	96.1	32 - 152				
Ethylbenzene	21.69	1.0	20	0	108	79 - 121				
Hexachlorobutadiene	22.96	1.0	20	0	115	66 - 134				
Isopropylbenzene	19.91	1.0	20	0	99.5	72 - 131				
m,p-Xylene	41.68	2.0	40	0	104	80 - 121				
Methylene chloride	22.47	2.0	20	0	112	74 - 124				
Naphthalene	23.83	1.0	20	0	119	61 - 128				
n-Butylbenzene	20.47	1.0	20	0	102	75 - 128				
n-Propylbenzene	21.46	1.0	20	0	107	76 - 126				
o-Xylene	21.34	1.0	20	0	107	78 - 122				
sec-Butylbenzene	19.78	1.0	20	0	98.9	77 - 126				
Styrene	20.68	1.0	20	0	103	78 - 123				
tert-Butylbenzene	19.4	1.0	20	0	97.0	78 - 124				
Tetrachloroethene	21.04	1.0	20	0	105	74 - 129				
Toluene	21.98	1.0	20	0	110	80 - 121				
trans-1,2-Dichloroethene	22.98	1.0	20	0	115	75 - 124				
trans-1,3-Dichloropropene	23.18	1.0	20	0	116	73 - 127				
Trichloroethene	20.96	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	19.14	1.0	20	0	95.7	65 - 141				
Vinyl chloride	19.74	1.0	20	0	98.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*51.83*	*1.0*	*50*	*0*	*104*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.21*	*1.0*	*50*	*0*	*100*	*85 - 114*				
Surr: Dibromofluoromethane	*50.01*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*51.14*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120803-01MS** Units: **ug/L** Analysis Date: **21-Dec-2020 15:43**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892744** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.14	1.0	20	0	95.7	78 - 124				
1,1,1-Trichloroethane	19.42	1.0	20	0	97.1	74 - 131				
1,1,2,2-Tetrachloroethane	19.69	1.0	20	0	98.5	71 - 121				
1,1,2-Trichloroethane	18.91	1.0	20	0	94.6	80 - 119				
1,1-Dichloroethane	18.49	1.0	20	0	92.4	77 - 125				
1,1-Dichloroethene	17.01	1.0	20	0	85.1	71 - 131				
1,1-Dichloropropene	20.64	1.0	20	0	103	78 - 125				
1,2,3-Trichlorobenzene	18.82	1.0	20	0	94.1	69 - 129				
1,2,3-Trichloropropane	19.42	1.0	20	0	97.1	73 - 122				
1,2,4-Trichlorobenzene	19.36	1.0	20	0	96.8	69 - 130				
1,2,4-Trimethylbenzene	21.1	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	19.11	1.0	20	0	95.5	62 - 128				
1,2-Dibromoethane	18.91	1.0	20	0	94.5	77 - 121				
1,2-Dichlorobenzene	19.22	1.0	20	0	96.1	80 - 119				
1,2-Dichloroethane	18.83	1.0	20	0	94.1	73 - 128				
1,2-Dichloropropane	19.38	1.0	20	0	96.9	78 - 122				
1,3,5-Trimethylbenzene	21.14	1.0	20	0	106	75 - 124				
1,3-Dichlorobenzene	19.66	1.0	20	0	98.3	80 - 119				
1,3-Dichloropropane	19.57	1.0	20	0	97.8	80 - 119				
1,4-Dichlorobenzene	20.16	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	19.05	1.0	20	0	95.3	60 - 139				
2-Butanone	36.8	2.0	40	0	92.0	56 - 143				
2-Chlorotoluene	20.92	1.0	20	0	105	79 - 122				
2-Hexanone	35.79	2.0	40	0	89.5	57 - 139				
4-Chlorotoluene	20.79	1.0	20	0	104	78 - 122				
4-Isopropyltoluene	21.93	1.0	20	0	110	77 - 127				
4-Methyl-2-pentanone	36.35	2.0	40	0	90.9	67 - 130				
Acetone	27.59	2.0	40	0	69.0	39 - 160				
Benzene	19.54	1.0	20	0	97.7	79 - 120				
Bromobenzene	20.07	1.0	20	0	100	80 - 120				
Bromochloromethane	16.96	1.0	20	0	84.8	78 - 123				
Bromodichloromethane	19.37	1.0	20	0	96.9	79 - 125				
Bromoform	19.5	1.0	20	0	97.5	66 - 130				
Bromomethane	19.78	1.0	20	0	98.9	53 - 141				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120803-01MS** Units: **ug/L** Analysis Date: **21-Dec-2020 15:43**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892744** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.51	2.0	40	0	93.8	64 - 133				
Carbon tetrachloride	21.84	1.0	20	0	109	72 - 136				
Chlorobenzene	19.35	1.0	20	0	96.7	82 - 118				
Chloroethane	16.83	1.0	20	0	84.2	60 - 138				
Chloroform	18.32	1.0	20	0	91.6	79 - 124				
Chloromethane	14.13	1.0	20	0	70.6	50 - 139				
cis-1,2-Dichloroethene	25.42	1.0	20	7.166	91.3	78 - 123				
cis-1,3-Dichloropropene	18.89	1.0	20	0	94.5	75 - 124				
Dibromochloromethane	18.71	1.0	20	0	93.6	74 - 126				
Dibromomethane	19.52	1.0	20	0	97.6	79 - 123				
Dichlorodifluoromethane	16.4	1.0	20	0	82.0	32 - 152				
Ethylbenzene	20.25	1.0	20	0	101	79 - 121				
Hexachlorobutadiene	23.81	1.0	20	0	119	66 - 134				
Isopropylbenzene	20.28	1.0	20	0	101	72 - 131				
m,p-Xylene	39.38	2.0	40	0	98.5	80 - 121				
Methylene chloride	17.8	2.0	20	0	89.0	74 - 124				
Naphthalene	16.71	1.0	20	0	83.6	61 - 128				
n-Butylbenzene	22.8	1.0	20	0	114	75 - 128				
n-Propylbenzene	21.19	1.0	20	0	106	76 - 126				
o-Xylene	19.48	1.0	20	0	97.4	78 - 122				
sec-Butylbenzene	22.16	1.0	20	0	111	77 - 126				
Styrene	19.31	1.0	20	0	96.6	78 - 123				
tert-Butylbenzene	21.7	1.0	20	0	109	78 - 124				
Tetrachloroethene	21.02	1.0	20	0	105	74 - 129				
Toluene	19.58	1.0	20	0	97.9	80 - 121				
trans-1,2-Dichloroethene	17.96	1.0	20	0	89.8	75 - 124				
trans-1,3-Dichloropropene	18.69	1.0	20	0	93.4	73 - 127				
Trichloroethene	22.69	1.0	20	2.069	103	79 - 123				
Trichlorofluoromethane	17.63	1.0	20	0	88.2	65 - 141				
Vinyl chloride	17.84	1.0	20	0	89.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.83*	*1.0*	*50*	*0*	*89.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.81*	*1.0*	*50*	*0*	*99.6*	*85 - 114*				
Surr: Dibromofluoromethane	*44.9*	*1.0*	*50*	*0*	*89.8*	*80 - 119*				
Surr: Toluene-d8	*50.65*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120803-01MSD** Units: **ug/L** Analysis Date: **21-Dec-2020 16:04**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.2	1.0	20	0	96.0	78 - 124	19.14	0.309	20	
1,1,1-Trichloroethane	18.1	1.0	20	0	90.5	74 - 131	19.42	7.04	20	
1,1,2,2-Tetrachloroethane	18.54	1.0	20	0	92.7	71 - 121	19.69	6.06	20	
1,1,2-Trichloroethane	18.46	1.0	20	0	92.3	80 - 119	18.91	2.4	20	
1,1-Dichloroethane	18.13	1.0	20	0	90.6	77 - 125	18.49	1.97	20	
1,1-Dichloroethene	16.34	1.0	20	0	81.7	71 - 131	17.01	3.99	20	
1,1-Dichloropropene	20.18	1.0	20	0	101	78 - 125	20.64	2.26	20	
1,2,3-Trichlorobenzene	21.37	1.0	20	0	107	69 - 129	18.82	12.7	20	
1,2,3-Trichloropropane	18.68	1.0	20	0	93.4	73 - 122	19.42	3.89	20	
1,2,4-Trichlorobenzene	20.22	1.0	20	0	101	69 - 130	19.36	4.34	20	
1,2,4-Trimethylbenzene	19.72	1.0	20	0	98.6	76 - 124	21.1	6.76	20	
1,2-Dibromo-3-chloropropane	17.98	1.0	20	0	89.9	62 - 128	19.11	6.08	20	
1,2-Dibromoethane	18.49	1.0	20	0	92.5	77 - 121	18.91	2.23	20	
1,2-Dichlorobenzene	18.54	1.0	20	0	92.7	80 - 119	19.22	3.56	20	
1,2-Dichloroethane	18.7	1.0	20	0	93.5	73 - 128	18.83	0.701	20	
1,2-Dichloropropane	18.9	1.0	20	0	94.5	78 - 122	19.38	2.54	20	
1,3,5-Trimethylbenzene	19.97	1.0	20	0	99.9	75 - 124	21.14	5.67	20	
1,3-Dichlorobenzene	18.51	1.0	20	0	92.6	80 - 119	19.66	6.04	20	
1,3-Dichloropropane	19.43	1.0	20	0	97.2	80 - 119	19.57	0.706	20	
1,4-Dichlorobenzene	18.88	1.0	20	0	94.4	79 - 118	20.16	6.55	20	
2,2-Dichloropropane	18.62	1.0	20	0	93.1	60 - 139	19.05	2.29	20	
2-Butanone	34.62	2.0	40	0	86.5	56 - 143	36.8	6.11	20	
2-Chlorotoluene	19.58	1.0	20	0	97.9	79 - 122	20.92	6.62	20	
2-Hexanone	36.29	2.0	40	0	90.7	57 - 139	35.79	1.39	20	
4-Chlorotoluene	19.54	1.0	20	0	97.7	78 - 122	20.79	6.17	20	
4-Isopropyltoluene	20.52	1.0	20	0	103	77 - 127	21.93	6.6	20	
4-Methyl-2-pentanone	37.79	2.0	40	0	94.5	67 - 130	36.35	3.89	20	
Acetone	27.58	2.0	40	0	68.9	39 - 160	27.59	0.0652	20	
Benzene	18.89	1.0	20	0	94.5	79 - 120	19.54	3.37	20	
Bromobenzene	18.88	1.0	20	0	94.4	80 - 120	20.07	6.1	20	
Bromochloromethane	17.91	1.0	20	0	89.6	78 - 123	16.96	5.43	20	
Bromodichloromethane	18.97	1.0	20	0	94.9	79 - 125	19.37	2.1	20	
Bromoform	18.99	1.0	20	0	94.9	66 - 130	19.5	2.66	20	
Bromomethane	18.04	1.0	20	0	90.2	53 - 141	19.78	9.21	20	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120803-01MSD** Units: **ug/L** Analysis Date: **21-Dec-2020 16:04**
Client ID: Run ID: **VOA6_375144** SeqNo: **5892745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	36.67	2.0	40	0	91.7	64 - 133	37.51	2.28	20	
Carbon tetrachloride	20.77	1.0	20	0	104	72 - 136	21.84	5.03	20	
Chlorobenzene	18.52	1.0	20	0	92.6	82 - 118	19.35	4.34	20	
Chloroethane	16.26	1.0	20	0	81.3	60 - 138	16.83	3.47	20	
Chloroform	17.76	1.0	20	0	88.8	79 - 124	18.32	3.09	20	
Chloromethane	14.05	1.0	20	0	70.2	50 - 139	14.13	0.567	20	
cis-1,2-Dichloroethene	24.84	1.0	20	7.166	88.4	78 - 123	25.42	2.31	20	
cis-1,3-Dichloropropene	18.93	1.0	20	0	94.6	75 - 124	18.89	0.195	20	
Dibromochloromethane	18.75	1.0	20	0	93.8	74 - 126	18.71	0.203	20	
Dibromomethane	18.74	1.0	20	0	93.7	79 - 123	19.52	4.09	20	
Dichlorodifluoromethane	16.24	1.0	20	0	81.2	32 - 152	16.4	0.99	20	
Ethylbenzene	19.93	1.0	20	0	99.6	79 - 121	20.25	1.62	20	
Hexachlorobutadiene	24.37	1.0	20	0	122	66 - 134	23.81	2.32	20	
Isopropylbenzene	19.97	1.0	20	0	99.9	72 - 131	20.28	1.52	20	
m,p-Xylene	39.28	2.0	40	0	98.2	80 - 121	39.38	0.261	20	
Methylene chloride	18.25	2.0	20	0	91.3	74 - 124	17.8	2.52	20	
Naphthalene	18.67	1.0	20	0	93.4	61 - 128	16.71	11.1	20	
n-Butylbenzene	21.83	1.0	20	0	109	75 - 128	22.8	4.33	20	
n-Propylbenzene	20.01	1.0	20	0	100	76 - 126	21.19	5.74	20	
o-Xylene	19.18	1.0	20	0	95.9	78 - 122	19.48	1.55	20	
sec-Butylbenzene	20.6	1.0	20	0	103	77 - 126	22.16	7.29	20	
Styrene	19.17	1.0	20	0	95.8	78 - 123	19.31	0.765	20	
tert-Butylbenzene	20.68	1.0	20	0	103	78 - 124	21.7	4.84	20	
Tetrachloroethene	20.58	1.0	20	0	103	74 - 129	21.02	2.11	20	
Toluene	19.07	1.0	20	0	95.3	80 - 121	19.58	2.65	20	
trans-1,2-Dichloroethene	18.54	1.0	20	0	92.7	75 - 124	17.96	3.2	20	
trans-1,3-Dichloropropene	18.67	1.0	20	0	93.3	73 - 127	18.69	0.112	20	
Trichloroethene	20.4	1.0	20	2.069	91.7	79 - 123	22.69	10.6	20	
Trichlorofluoromethane	16.96	1.0	20	0	84.8	65 - 141	17.63	3.91	20	
Vinyl chloride	17.01	1.0	20	0	85.1	58 - 137	17.84	4.73	20	
Surr: 1,2-Dichloroethane-d4	*45.51*	*1.0*	*50*	*0*	*91.0*	*81 - 118*	*44.83*	*1.5*	*20*	
Surr: 4-Bromofluorobenzene	*49*	*1.0*	*50*	*0*	*98.0*	*85 - 114*	*49.81*	*1.65*	*20*	
Surr: Dibromofluoromethane	*45.38*	*1.0*	*50*	*0*	*90.8*	*80 - 119*	*44.9*	*1.07*	*20*	
Surr: Toluene-d8	*50.23*	*1.0*	*50*	*0*	*100*	*89 - 112*	*50.65*	*0.831*	*20*	

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120815

QC BATCH REPORT

Batch ID: R375144 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20120815-01	HS20120815-02	HS20120815-03	HS20120815-04
HS20120815-05	HS20120815-06	HS20120815-07	HS20120815-08
HS20120815-09	HS20120815-10		

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: **HS20120815**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

ALS Houston, US Date: 31-Dec-20

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 31-Dec-20

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120815

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120815-01	MW22_121420	Login	12/16/2020 11:03:46 AM	NDR	MET034
HS20120815-01	MW22_121420	Login	12/16/2020 11:03:46 AM	NDR	Sub
HS20120815-01	MW22_121420	Login	12/16/2020 11:03:46 AM	NDR	VOA136
HS20120815-02	18CPTMW06_121420	Login	12/16/2020 11:03:46 AM	NDR	Sub
HS20120815-02	18CPTMW06_121420	Login	12/16/2020 11:03:46 AM	NDR	EXT150
HS20120815-02	18CPTMW06_121420	Login	12/16/2020 11:03:46 AM	NDR	VOA136
HS20120815-03	18CPTMW06_121420_a	Login	12/16/2020 11:03:46 AM	NDR	Sub
HS20120815-03	18CPTMW06_121420_a	Login	12/16/2020 11:03:46 AM	NDR	EXT150
HS20120815-03	18CPTMW06_121420_a	Login	12/16/2020 11:03:46 AM	NDR	VOA136
HS20120815-04	109_121420	Login	12/16/2020 11:03:46 AM	NDR	MET034
HS20120815-04	109_121420	Login	12/16/2020 11:03:46 AM	NDR	Sub
HS20120815-04	109_121420	Login	12/16/2020 11:03:46 AM	NDR	EXT150
HS20120815-05	MW21_121420	Login	12/16/2020 11:03:46 AM	NDR	Sub
HS20120815-05	MW21_121420	Login	12/16/2020 11:03:46 AM	NDR	MET034
HS20120815-05	MW21_121420	Login	12/16/2020 11:03:46 AM	NDR	EXT150
HS20120815-05	MW21_121420	Login	12/16/2020 11:03:46 AM	NDR	VOA136

ALS Houston, US Date: 31-Dec-20

Sample Receipt Checklist

Work Order ID: HS20120815 **Date/Time Received:** **16-Dec-2020 10:40**

Client Name: Bhate Environmental **Received by:** **Pablo Marinez**

Completed By:	/S/ Nilesh D. Ranchod	16-Dec-2020 13:28	**Reviewed by:**	/S/ RJ Modashia	16-Dec-2020 12:19
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	4.4°C/4.4°C UC/C-	IR25
Cooler(s)/Kit(s):	45628	
Date/Time sample(s) sent to storage:	12/16/2020 13:45	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate ENVIRONMENTAL CONSTRUCTION ENERGY

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS	1, 4 - DIOXANE							Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
							Sample Analysis Requested (5)											Quality Assurance Samples (6)			
MW22_121420	14 DEC 2020	0755	-	N		WG	5	X	X	X											
18CPTMW06_121420	14 DEC 2020	0840	-	N		WG	5	X	X		X										
18CPTMW06_121420_a	14 DEC 2020	0840	-	FD		WG	5	X	X		X										
[redacted]109_121420	14 DEC 2020	0935		N		WG	5	X	X		X										
MW21_121420	14 DEC 2020	1020		N		WG	6	X	X	X	X										
18CPTMW07_121420	14 DEC 2020	1105	-	N		WG	5	X	X		X										
18CPTMW24_121420	14 DEC 2020	1150	-	N		WG	6	X	X	X	X										
18WW08_121420	14 DEC 2020	1240	-	N		WG	5	X	X		X										
AWD4_121420	14 DEC 2020	1330	-	N		WG	6	X	X	X	X										
TRIP BLANK	14 DEC 2020		-	TB		WG	2	X													
			-																		

COMMENTS: ____

HS20120815

Bhate Environmental Associates, Inc.
LHAAP 18 24

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	12/15/20	1430	1. PM	12/16/20	10:40
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped No.:

Method of Shipment: ____

Fed Ex Airbill Number:

Analytical Lab: ALS 10450 Stanciff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

4562E 4.4C 1R25 CFO

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

45628

CUSTODY SEAL

Date: 12/15/20 Time: 1432
Name: Scott Beesinger
Company: Bhate

Seal Broken By: SM
Date: 12/16/20

45628 DEC 16 2020

Must Deliver Next Business Day
Time and Temperature Sensitive!

45628

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 25NOV20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 26x14x14 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-B075073-RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8883 1330

WED - 16 DEC 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

December 30, 2020 Service Request No:E2001237

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120815

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 16, 2020
For your reference, these analyses have been assigned our service request number **E2001237.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001237
Project:	HS20120815	**Date Received:**	12/16/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Nine samples were received for analysis at ALS Environmental in Houston on 12/16/20.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000703: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits

Samples E2001237-002/-003/-006/-007 were analyzed at a dilution due to matrix interference with the Internal Standard at a 1x DF.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001237
Project: HS20120815

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001237-001	MW22_121420	12/14/2020	0755
E2001237-002	18CPTMW06_121420	12/14/2020	0840
E2001237-003	18CPTMW06_121420_a	12/14/2020	0840
E2001237-004	109_121420	12/14/2020	0935
E2001237-005	MW21_121420	12/14/2020	1020
E2001237-006	18CPTMW07_121420	12/14/2020	1105
E2001237-007	18CPTMW24_121420	12/14/2020	1150
E2001237-008	18WW08_121420	12/14/2020	1240
E2001237-009	AWD4_121420	12/14/2020	1330

Service Request Summary

Folder #: **E2001237**
Client Name: ALS Environmental - US
Project Name: HS20120815
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/16/20
Internal Due Date: 12/31/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120815
EDD: No EDD Specified

9 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001237-001	MW22_121420	Ground Water	12/14/20 0755	**IV**
E2001237-002	18CPTMW06_121420	Ground Water	12/14/20 0840	**IV**
E2001237-003	18CPTMW06_121420_a	Ground Water	12/14/20 0840	**IV**
E2001237-004	109_121420	Ground Water	12/14/20 0935	**IV**
E2001237-005	MW21_121420	Ground Water	12/14/20 1020	**IV**
E2001237-006	18CPTMW07_121420	Ground Water	12/14/20 1105	**IV**
E2001237-007	18CPTMW24_121420	Ground Water	12/14/20 1150	**IV**
E2001237-008	18WW08_121420	Ground Water	12/14/20 1240	**IV**
E2001237-009	AWD4_121420	Ground Water	12/14/20 1330	**IV**

Service Request Summary

Folder #: **E2001237**
Client Name: ALS Environmental - US
Project Name: HS20120815
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/16/20
Internal Due Date: 12/31/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120815
EDD: No EDD Specified

9 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	9	level II 12/31,level IV due 1/8

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID: 15353**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120815
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120815-01**	**MW22_121420**	**Groundwater**	**14 Dec 2020 07:55**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
2.	**HS20120815-02**	**18CTPMW06_121420**	**Groundwater**	**14 Dec 2020 08:40**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
3.	**HS20120815-03**	**18CTPMW06_121420_a**	**Groundwater**	**14 Dec 2020 08:40**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
4.	**HS20120815-04**	**109_121420**	**Groundwater**	**14 Dec 2020 09:35**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
5.	**HS20120815-05**	**MW21_121420**	**Groundwater**	**14 Dec 2020 10:20**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
6.	**HS20120815-06**	**18CPTMW07_121420**	**Groundwater**	**14 Dec 2020 11:05**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
7.	**HS20120815-07**	**18CPTMW24_121420**	**Groundwater**	**14 Dec 2020 11:50**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
8.	**HS20120815-08**	**18WW08_121420**	**Groundwater**	**14 Dec 2020 12:40**
	Provide Level II and Level IV reports in separate pdf			31 Dec 2020
9.	**HS20120815-09**	**AWD4_121420**	**Groundwater**	**14 Dec 2020 13:30**

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID: 15353**

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
Provide Level II and Level IV reports in separate pdf			31 Dec 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: [illegible] Date/Time: 12/16/20 1145

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-HI

Thermometer ID 1125

Date/Time Received: 12/16/20 Initials: CH Date/Time Logged in: 12/16/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/16/20	1155	CH	4.1	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371928 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/22/20 09:08

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001235-001	AWD1_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2001235-002	120_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2001235-003	MW14_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2001235-004	MW3_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001235-005	MW3_121520_a	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001235-006	18CPTMW14_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001235-007	18WW22_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001235-008	18CPTMW18_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001235-009	C03_121520	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001236-001	LH18/24-SP650_120220-BIX	.01	6850/ClO4 DOD			Water	10mL	
11	E2001237-001	MW22_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001237-002	18CPTMW06_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001237-003	18CPTMW06_121420_a	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001237-004	109_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001237-005	MW21_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001237-006	18CPTMW07_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001237-007	18CPTMW24_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001237-008	18WW08_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
19	E2001237-009	AWD4_121420	.01	6850/ClO4 DOD			Ground Water	10mL	
20	EQ2000703-01	MB		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000703-02	LCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000703-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000703-02 1.00µL EQ2000703-03 1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001235-001	100.00µL	E2001235-002	100.00µL	E2001235-003	100.00µL	E2001235-004	100.00µL	E2001235-005	100.00µL	E2001235-006	100.00µL
E2001235-007	100.00µL	E2001235-008	100.00µL	E2001235-009	100.00µL	E2001236-001	100.00µL	E2001237-001	100.00µL	E2001237-002	100.00µL
E2001237-003	100.00µL	E2001237-004	100.00µL	E2001237-005	100.00µL	E2001237-006	100.00µL	E2001237-007	100.00µL	E2001237-008	100.00µL
E2001237-009	100.00µL	EQ2000703-01	100.00µL	EQ2000703-02	100.00µL	EQ2000703-03	100.00µL				

Preparation Information Benchsheet

Prep Run#: 371928 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/22/20 09:08

Preparation Steps

Step: Preparation
Started: 12/22/20 09:08
Finished: 12/22/20 14:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/22/20

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 0755
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	MW22_121420	**Units:**	µg/L
Lab Code:	E2001237-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**474**		2.00	1.00	0.500	20	12/22/20	12/29/20 16:14	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 0840
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	18CPTMW06_121420	**Units:**	µg/L
Lab Code:	E2001237-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/22/20	12/29/20 16:24	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 0840
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	18CPTMW06_121420_a	**Units:**	µg/L
Lab Code:	E2001237-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/22/20	12/29/20 16:31	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 0935
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	109_121420	**Units:**	µg/L
Lab Code:	E2001237-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**4530**		10.0	5.00	2.50	100	12/22/20	12/29/20 16:39	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 1020
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	MW21_121420	**Units:**	µg/L
Lab Code:	E2001237-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**25500**		100	50.0	25.0	1000	12/22/20	12/29/20 16:55	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 1105
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	18CPTMW07_121420	**Units:**	µg/L
Lab Code:	E2001237-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.224**		0.200	0.100	0.0500	2	12/22/20	12/29/20 17:03	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 1150
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	18CPTMW24_121420	**Units:**	µg/L
Lab Code:	E2001237-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**6.24**		2.00	1.00	0.500	20	12/22/20	12/30/20 13:58	371928	708720	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 1240
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	18WW08_121420	**Units:**	µg/L
Lab Code:	E2001237-008	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1790**		10.0	5.00	2.50	100	12/22/20	12/29/20 17:19	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	12/14/20 1330
Sample Matrix:	Ground Water	**Date Received:**	12/16/20
Sample Name:	AWD4_121420	**Units:**	µg/L
Lab Code:	E2001237-009	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**102**		1.00	0.500	0.250	10	12/22/20	12/29/20 17:27	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000703-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/22/20	12/29/20 13:59	371928	708661	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Analyzed:**	12/29/20
Sample Matrix:	Ground Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	371928

	Lab Control Sample EQ2000703-02			Duplicate Lab Control Sample EQ2000703-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0919	0.100	92	0.0968	0.100	97	84 - 119	5	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000703-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0919**	J	0.100	0.0500	0.0250	1	12/22/20	12/29/20 14:07	371928	708661	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001237
Project:	HS20120815	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000703-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0968**	J	0.100	0.0500	0.0250	1	12/22/20	12/29/20 14:15	371928	708661	

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January 05, 2021

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20120908**

Laboratory Results for: **LHAAP 18 24**

Dear Marcia Olive,

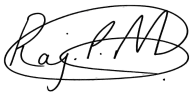
ALS Environmental received 8 sample(s) on Dec 17, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,



Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120908

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20120908-01	MW9_121620	Groundwater		16-Dec-2020 07:35	17-Dec-2020 11:10	☐
HS20120908-02	18CPTMW10SW_121620	Groundwater		16-Dec-2020 08:25	17-Dec-2020 11:10	☐
HS20120908-03	18CPTMW10DW_121620	Groundwater		16-Dec-2020 09:10	17-Dec-2020 11:10	☐
HS20120908-04	18WW06_121620	Groundwater		16-Dec-2020 10:00	17-Dec-2020 11:10	☐
HS20120908-05	18WW02_121620	Groundwater		16-Dec-2020 10:45	17-Dec-2020 11:10	☐
HS20120908-06	18WW10_121620	Groundwater		16-Dec-2020 11:50	17-Dec-2020 11:10	☐
HS20120908-07	MW17_121620	Groundwater		16-Dec-2020 12:35	17-Dec-2020 11:10	☐
HS20120908-08	Trip Blank	Water	VBLKW-112420-43	16-Dec-2020 00:00	17-Dec-2020 11:10	☐

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: LHAAP 18 24
Work Order: HS20120908

Work Order Comments

• The analysis for perchlorate was subcontracted to our ALS Houston TX, High Resolution Lab. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160949

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R375590

Sample ID: CCV

• Hexachlorobutadiene exceeded %D limits for CCV. Samples are ND for the compound

Sample ID: VLCSW-201229

• 1,2,3-Trichlorobenzene exceeded QC limits for LCS. Samples are ND for the compound.

Sample ID: HS20120972-07MSD

• MSD is for an unrelated sample

Metals by Method SW7470

Batch ID: 161269

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 161250

Sample ID: 18CPTMW10DW_121620 (HS20120908-03MS)

• The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Potassium,Sodium)

Sample ID: 18CPTMW10DW_121620 (HS20120908-03MSD)

• Aluminum failed for MSD but passed for MS and PDS.

Sample ID: 18CPTMW10DW_121620 (HS20120908-03SD)

• The percent difference between the results of the sample and the serial dilution were greater than 10%. (Sodium)

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW9_121620
Collection Date: 16-Dec-2020 07:35

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 15:00
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 15:00
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 15:00
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 15:00
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 15:00
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 15:00
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 15:00
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 15:00
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 15:00
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 15:00
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 15:00
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 15:00
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 15:00
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Chloroform	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 15:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW9_121620
Collection Date: 16-Dec-2020 07:35

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
cis-1,2-Dichloroethene	**17**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 15:00
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 15:00
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 15:00
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 15:00
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 15:00
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Trichloroethene	**870**		**5.0**	**12**	**25**	**ug/L**	25	29-Dec-2020 16:46
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 15:00
Surr: 1,2-Dichloroethane-d4	*85.9*			**0**	*81-118*	*%REC*	*25*	*29-Dec-2020 16:46*
Surr: 1,2-Dichloroethane-d4	*85.2*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 15:00*
Surr: 4-Bromofluorobenzene	*96.7*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 15:00*
Surr: 4-Bromofluorobenzene	*92.5*			**0**	*85-114*	*%REC*	*25*	*29-Dec-2020 16:46*
Surr: Dibromofluoromethane	*87.8*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 15:00*
Surr: Dibromofluoromethane	*87.8*			**0**	*80-119*	*%REC*	*25*	*29-Dec-2020 16:46*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 15:00*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*25*	*29-Dec-2020 16:46*
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.37**		**0.010**	**0.010**	**0.010**	**ug/L**	1	30-Dec-2020 11:24
Surr: 2-Fluorobiphenyl	*76.7*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 11:24*
Surr: 4-Terphenyl-d14	*80.7*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 11:24*
Surr: Nitrobenzene-d5	*70.5*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 11:24*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW9_121620
Collection Date: 16-Dec-2020 07:35

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2021		Analyst: JHD
Aluminum	**0.0199**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	04-Jan-2021 17:41
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 17:41
Arsenic	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 17:41
Barium	**0.0859**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:41
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 17:41
Cadmium	**0.000311**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	04-Jan-2021 17:41
Calcium	**9.06**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	04-Jan-2021 17:41
Chromium	**0.0895**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:41
Cobalt	**0.0176**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	04-Jan-2021 17:41
Copper	**0.00186**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:41
Iron	**0.844**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:41
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	04-Jan-2021 17:41
Magnesium	**3.17**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:41
Manganese	**0.191**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:41
Nickel	**0.0158**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:41
Potassium	**0.349**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:41
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	04-Jan-2021 17:41
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	04-Jan-2021 17:41
Sodium	**17.0**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:41
Thallium	**0.000290**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	04-Jan-2021 17:41
Vanadium	**0.000659**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:41
Zinc	**0.00766**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:41
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 04-Jan-2021		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	04-Jan-2021 15:54
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW10SW_121620
Collection Date: 16-Dec-2020 08:25

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:49
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 17:49
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 17:49
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 17:49
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:49
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:49
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 17:49
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 17:49
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:49
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 17:49
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 17:49
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:49
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 17:49
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW10SW_121620
Collection Date: 16-Dec-2020 08:25

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 17:49
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 17:49
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 17:49
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:49
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Trichloroethene	**0.70**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 17:49
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:49
Surr: 1,2-Dichloroethane-d4	*83.9*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 17:49*
Surr: 4-Bromofluorobenzene	*96.1*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 17:49*
Surr: Dibromofluoromethane	*87.8*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 17:49*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 17:49*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	30-Dec-2020 11:42
Surr: 2-Fluorobiphenyl	*72.6*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 11:42*
Surr: 4-Terphenyl-d14	*78.8*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 11:42*
Surr: Nitrobenzene-d5	*65.7*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 11:42*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW10DW_121620
Collection Date: 16-Dec-2020 09:10

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:18
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 14:18
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 14:18
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 14:18
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:18
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:18
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 14:18
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 14:18
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:18
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 14:18
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 14:18
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:18
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 14:18
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW10DW_121620
Collection Date: 16-Dec-2020 09:10

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 14:18
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 14:18
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 14:18
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:18
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Trichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 14:18
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:18
Surr: 1,2-Dichloroethane-d4	*84.3*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 14:18*
Surr: 4-Bromofluorobenzene	*94.2*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 14:18*
Surr: Dibromofluoromethane	*88.0*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 14:18*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 14:18*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW10DW_121620
Collection Date: 16-Dec-2020 09:10

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2021		Analyst: JHD
Aluminum	**0.204**		**0.0180**	**0.0500**	**0.100**	**mg/L**	10	05-Jan-2021 11:39
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 17:43
Arsenic	**0.00200**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Barium	**0.112**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 17:43
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 17:43
Calcium	**9.64**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	04-Jan-2021 17:43
Chromium	**0.00651**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Cobalt	**0.000494**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Copper	**0.00299**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Iron	**3.28**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:43
Lead	**0.00163**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Magnesium	**5.31**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:43
Manganese	**0.0679**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Nickel	**0.00188**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Potassium	**83.6**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:43
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	04-Jan-2021 17:43
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	04-Jan-2021 17:43
Sodium	**171**		**0.140**	**0.500**	**2.00**	**mg/L**	10	05-Jan-2021 11:39
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 17:43
Vanadium	**0.00133**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
Zinc	**0.0147**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:43
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 04-Jan-2021		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	04-Jan-2021 15:59
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW06_121620
Collection Date: 16-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:10
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:10
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:10
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:10
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:10
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:10
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 18:10
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 18:10
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:10
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 18:10
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 18:10
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:10
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 18:10
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW06_121620
Collection Date: 16-Dec-2020 10:00

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 18:10
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 18:10
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 18:10
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:10
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Toluene	**9.7**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 18:10
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:10
Surr: 1,2-Dichloroethane-d4	*84.5*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 18:10*
Surr: 4-Bromofluorobenzene	*93.2*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 18:10*
Surr: Dibromofluoromethane	*88.1*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 18:10*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 18:10*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	30-Dec-2020 12:00
Surr: 2-Fluorobiphenyl	*104*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:00*
Surr: 4-Terphenyl-d14	*128*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:00*
Surr: Nitrobenzene-d5	*92.6*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:00*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW02_121620
Collection Date: 16-Dec-2020 10:45

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:31
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:31
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:31
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:31
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 18:31
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 18:31
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:31
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 18:31
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 18:31
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 18:31
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW02_121620
Collection Date: 16-Dec-2020 10:45

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 18:31
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 18:31
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 18:31
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:31
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:31
Surr: 1,2-Dichloroethane-d4	*83.5*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 18:31*
Surr: 4-Bromofluorobenzene	*94.8*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 18:31*
Surr: Dibromofluoromethane	*88.1*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 18:31*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 18:31*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	0.010	U	0.010	0.010	0.010	ug/L	1	30-Dec-2020 12:18
Surr: 2-Fluorobiphenyl	*72.0*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:18*
Surr: 4-Terphenyl-d14	*84.2*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:18*
Surr: Nitrobenzene-d5	*67.1*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:18*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW02_121620
Collection Date: 16-Dec-2020 10:45

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2021		Analyst: JHD
Aluminum	**0.434**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	04-Jan-2021 17:58
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 17:58
Arsenic	**0.000549**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Barium	**0.0392**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 17:58
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 17:58
Calcium	**7.02**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	04-Jan-2021 17:58
Chromium	**0.0131**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Cobalt	**0.000225**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Copper	**0.00408**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Iron	**1.20**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:58
Lead	**0.000627**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Magnesium	**1.26**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:58
Manganese	**0.0866**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Nickel	**0.00933**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Potassium	**2.02**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:58
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	04-Jan-2021 17:58
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	04-Jan-2021 17:58
Sodium	**27.1**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 17:58
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 17:58
Vanadium	**0.00207**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
Zinc	**0.00230**	J	**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 17:58
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 04-Jan-2021		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	04-Jan-2021 16:00
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW10_121620
Collection Date: 16-Dec-2020 11:50

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:52
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:52
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:52
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 18:52
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:52
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:52
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 18:52
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 18:52
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:52
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 18:52
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 18:52
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:52
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 18:52
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18WW10_121620
Collection Date: 16-Dec-2020 11:50

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 18:52
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 18:52
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 18:52
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 18:52
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 18:52
Surr: 1,2-Dichloroethane-d4	*86.5*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 18:52*
Surr: 4-Bromofluorobenzene	*95.2*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 18:52*
Surr: Dibromofluoromethane	*89.4*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 18:52*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 18:52*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.082**		**0.010**	**0.010**	**0.010**	**ug/L**	1	30-Dec-2020 12:36
Surr: 2-Fluorobiphenyl	*76.8*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:36*
Surr: 4-Terphenyl-d14	*91.2*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:36*
Surr: Nitrobenzene-d5	*72.1*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 12:36*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW17_121620
Collection Date: 16-Dec-2020 12:35

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SEMIVOLATILES SIM	**Method:SW8270SIM**					Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.097**		**0.010**	**0.010**	**0.010**	**ug/L**	1	30-Dec-2020 15:18
Surr: 2-Fluorobiphenyl	*76.1*		**0**	*40-140*		*%REC*	*1*	*30-Dec-2020 15:18*
Surr: 4-Terphenyl-d14	*95.1*		**0**	*40-140*		*%REC*	*1*	*30-Dec-2020 15:18*
Surr: Nitrobenzene-d5	*73.3*		**0**	*40-140*		*%REC*	*1*	*30-Dec-2020 15:18*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)	**Method:NA**							Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 16-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-08
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 13:36
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 13:36
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 13:36
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 13:36
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 13:36
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 13:36
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 13:36
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 13:36
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 13:36
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 13:36
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 13:36
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 13:36
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 13:36
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 16-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20120908
Lab ID:HS20120908-08
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 13:36
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 13:36
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 13:36
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 13:36
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 13:36
Surr: 1,2-Dichloroethane-d4	*84.0*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 13:36*
Surr: 4-Bromofluorobenzene	*94.2*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 13:36*
Surr: Dibromofluoromethane	*88.1*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 13:36*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 13:36*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

Batch ID: 160949 **Start Date:** 22 Dec 2020 09:49 **End Date:** 22 Dec 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120908-01	1	1000 (mL)	1 (mL)	0.001
HS20120908-02	1	1000 (mL)	1 (mL)	0.001
HS20120908-04	1	1000 (mL)	1 (mL)	0.001
HS20120908-05	1	1000 (mL)	1 (mL)	0.001
HS20120908-06	1	1000 (mL)	1 (mL)	0.001
HS20120908-07	1	1000 (mL)	1 (mL)	0.001

Batch ID: 161250 **Start Date:** 02 Jan 2021 09:30 **End Date:** 02 Jan 2021 13:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120908-01		10 (mL)	10 (mL)	1
HS20120908-03		10 (mL)	10 (mL)	1
HS20120908-05		10 (mL)	10 (mL)	1

Batch ID: 161269 **Start Date:** 04 Jan 2021 09:00 **End Date:** 04 Jan 2021 11:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20120908-01		10 (mL)	10 (mL)	1
HS20120908-03		10 (mL)	10 (mL)	1
HS20120908-05		10 (mL)	10 (mL)	1

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160949 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Groundwater	
HS20120908-01	MW9_121620	16 Dec 2020 07:35		22 Dec 2020 09:49	30 Dec 2020 11:24	1
HS20120908-02	18CPTMW10SW_121620	16 Dec 2020 08:25		22 Dec 2020 09:49	30 Dec 2020 11:42	1
HS20120908-04	18WW06_121620	16 Dec 2020 10:00		22 Dec 2020 09:49	30 Dec 2020 12:00	1
HS20120908-05	18WW02_121620	16 Dec 2020 10:45		22 Dec 2020 09:49	30 Dec 2020 12:18	1
HS20120908-06	18WW10_121620	16 Dec 2020 11:50		22 Dec 2020 09:49	30 Dec 2020 12:36	1
HS20120908-07	MW17_121620	16 Dec 2020 12:35		22 Dec 2020 09:49	30 Dec 2020 15:18	1
Batch ID: 161250 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20120908-01	MW9_121620	16 Dec 2020 07:35		02 Jan 2021 13:30	04 Jan 2021 17:41	1
HS20120908-03	18CPTMW10DW_121620	16 Dec 2020 09:10		02 Jan 2021 13:30	05 Jan 2021 11:39	10
HS20120908-03	18CPTMW10DW_121620	16 Dec 2020 09:10		02 Jan 2021 13:30	04 Jan 2021 17:43	1
HS20120908-05	18WW02_121620	16 Dec 2020 10:45		02 Jan 2021 13:30	04 Jan 2021 17:58	1
Batch ID: 161269 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Groundwater	
HS20120908-01	MW9_121620	16 Dec 2020 07:35		04 Jan 2021 09:17	04 Jan 2021 15:54	1
HS20120908-03	18CPTMW10DW_121620	16 Dec 2020 09:10		04 Jan 2021 09:17	04 Jan 2021 15:59	1
HS20120908-05	18WW02_121620	16 Dec 2020 10:45		04 Jan 2021 09:17	04 Jan 2021 16:00	1
Batch ID: R375590 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20120908-08	Trip Blank	16 Dec 2020 00:00			29 Dec 2020 13:36	1
Batch ID: R375590 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20120908-01	MW9_121620	16 Dec 2020 07:35			29 Dec 2020 16:46	25
HS20120908-01	MW9_121620	16 Dec 2020 07:35			29 Dec 2020 15:00	1
HS20120908-02	18CPTMW10SW_121620	16 Dec 2020 08:25			29 Dec 2020 17:49	1
HS20120908-03	18CPTMW10DW_121620	16 Dec 2020 09:10			29 Dec 2020 14:18	1
HS20120908-04	18WW06_121620	16 Dec 2020 10:00			29 Dec 2020 18:10	1
HS20120908-05	18WW02_121620	16 Dec 2020 10:45			29 Dec 2020 18:31	1
HS20120908-06	18WW10_121620	16 Dec 2020 11:50			29 Dec 2020 18:52	1
Batch ID: R375718 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS20120908-01	MW9_121620	16 Dec 2020 07:35			31 Dec 2020 12:46	1
HS20120908-02	18CPTMW10SW_121620	16 Dec 2020 08:25			31 Dec 2020 12:46	1
HS20120908-03	18CPTMW10DW_121620	16 Dec 2020 09:10			31 Dec 2020 12:46	1
HS20120908-04	18WW06_121620	16 Dec 2020 10:00			31 Dec 2020 12:46	1
HS20120908-05	18WW02_121620	16 Dec 2020 10:45			31 Dec 2020 12:46	1
HS20120908-06	18WW10_121620	16 Dec 2020 11:50			31 Dec 2020 12:46	1
HS20120908-07	MW17_121620	16 Dec 2020 12:35			31 Dec 2020 12:46	1

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-161250** Units: **mg/L** Analysis Date: **04-Jan-2021 17:37**
Client ID: Run ID: **ICPMS05_375807** SeqNo: **5909493** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.002662	0.0100								J
Antimony	0.00100	0.00500								U
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Copper	0.00250	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.0500	0.200								U
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.06023	0.200								J
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-161250** Units: **mg/L** Analysis Date: **04-Jan-2021 17:39**
Client ID: Run ID: **ICPMS05_375807** SeqNo: **5909494** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1061	0.0100	0.1	0	106	84 - 117				
Antimony	0.04865	0.00500	0.05	0	97.3	85 - 117				
Arsenic	0.05157	0.00500	0.05	0	103	84 - 116				
Barium	0.04726	0.00500	0.05	0	94.5	86 - 114				
Beryllium	0.04598	0.00200	0.05	0	92.0	83 - 121				
Cadmium	0.0495	0.00200	0.05	0	99.0	87 - 115				
Calcium	4.965	0.500	5	0	99.3	87 - 118				
Chromium	0.04896	0.00500	0.05	0	97.9	85 - 116				
Cobalt	0.04936	0.00500	0.05	0	98.7	86 - 115				
Copper	0.05023	0.00500	0.05	0	100	85 - 118				
Iron	4.976	0.200	5	0	99.5	87 - 118				
Lead	0.04656	0.00500	0.05	0	93.1	88 - 115				
Magnesium	5.202	0.200	5	0	104	83 - 118				
Manganese	0.04968	0.00500	0.05	0	99.4	87 - 115				
Nickel	0.04938	0.00500	0.05	0	98.8	85 - 117				
Potassium	5.288	0.200	5	0	106	87 - 115				
Selenium	0.05533	0.00500	0.05	0	111	80 - 120				
Silver	0.04383	0.00500	0.05	0	87.7	85 - 116				
Sodium	5.238	0.200	5	0	105	85 - 117				
Thallium	0.04295	0.00200	0.05	0	85.9	82 - 116				
Vanadium	0.04924	0.00500	0.05	0	98.5	86 - 115				
Zinc	0.05275	0.00500	0.05	0	106	83 - 119				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20120908-03MS** Units: **mg/L** Analysis Date: **04-Jan-2021 17:46**
Client ID: **18CPTMW10DW_121620** Run ID: **ICPMS05_375807** SeqNo: **5909498** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4226	0.0100	0.1	0.3168	106	84 - 117				
Antimony	0.0472	0.00500	0.05	0.000319	93.8	85 - 117				
Arsenic	0.05074	0.00500	0.05	0.001997	97.5	84 - 116				
Barium	0.1596	0.00500	0.05	0.1115	96.1	86 - 114				
Beryllium	0.05408	0.00200	0.05	0.000036	108	83 - 121				
Cadmium	0.04665	0.00200	0.05	0.000038	93.2	87 - 115				
Calcium	14.64	0.500	5	9.644	100.0	87 - 118				
Chromium	0.05458	0.00500	0.05	0.006506	96.2	85 - 116				
Cobalt	0.04719	0.00500	0.05	0.000494	93.4	86 - 115				
Copper	0.04903	0.00500	0.05	0.002986	92.1	85 - 118				
Iron	8.085	0.200	5	3.277	96.2	87 - 118				
Lead	0.04703	0.00500	0.05	0.001627	90.8	88 - 115				
Magnesium	10.26	0.200	5	5.31	99.0	83 - 118				
Manganese	0.1147	0.00500	0.05	0.0679	93.6	87 - 115				
Nickel	0.0482	0.00500	0.05	0.001877	92.6	85 - 117				
Potassium	89.64	0.200	5	83.57	121	87 - 115				SO
Selenium	0.04928	0.00500	0.05	0.000149	98.3	80 - 120				
Sodium	191.3	0.200	5	184.9	127	85 - 117				SEO
Thallium	0.04172	0.00200	0.05	-0.000048	83.5	82 - 116				
Vanadium	0.05026	0.00500	0.05	0.001331	97.9	86 - 115				
Zinc	0.05706	0.00500	0.05	0.01475	84.6	83 - 119				

MS Sample ID: **HS20120908-03MS** Units: **mg/L** Analysis Date: **05-Jan-2021 11:36**
Client ID: **18CPTMW10DW_121620** Run ID: **ICPMS05_375891** SeqNo: **5910255** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	0.04265	0.00500	0.05	0	85.3	85 - 116				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20120908-03MSD** Units: **mg/L** Analysis Date: **04-Jan-2021 17:48**
Client ID: **18CPTMW10DW_121620** Run ID: **ICPMS05_375807** SeqNo: **5909499** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4999	0.0100	0.1	0.3168	183	84 - 117	0.4226	16.8	20	S
Antimony	0.04772	0.00500	0.05	0.000319	94.8	85 - 117	0.0472	1.11	20	
Arsenic	0.05273	0.00500	0.05	0.001997	101	84 - 116	0.05074	3.83	20	
Barium	0.1657	0.00500	0.05	0.1115	108	86 - 114	0.1596	3.75	20	
Beryllium	0.057	0.00200	0.05	0.000036	114	83 - 121	0.05408	5.26	20	
Cadmium	0.04856	0.00200	0.05	0.000038	97.0	87 - 115	0.04665	4	20	
Calcium	14.91	0.500	5	9.644	105	87 - 118	14.64	1.8	20	
Chromium	0.05675	0.00500	0.05	0.006506	100	85 - 116	0.05458	3.89	20	
Cobalt	0.04909	0.00500	0.05	0.000494	97.2	86 - 115	0.04719	3.94	20	
Copper	0.05024	0.00500	0.05	0.002986	94.5	85 - 118	0.04903	2.43	20	
Iron	8.26	0.200	5	3.277	99.7	87 - 118	8.085	2.13	20	
Lead	0.04863	0.00500	0.05	0.001627	94.0	88 - 115	0.04703	3.34	20	
Magnesium	10.55	0.200	5	5.31	105	83 - 118	10.26	2.8	20	
Manganese	0.1185	0.00500	0.05	0.0679	101	87 - 115	0.1147	3.27	20	
Nickel	0.0497	0.00500	0.05	0.001877	95.7	85 - 117	0.0482	3.07	20	
Potassium	91.96	0.200	5	83.57	168	87 - 115	89.64	2.55	20	SO
Selenium	0.05	0.00500	0.05	0.000149	99.7	80 - 120	0.04928	1.45	20	
Silver	0.04235	0.00500	0.05	-0.000302	85.3	85 - 116	0.04085	3.61	20	
Sodium	197.9	0.200	5	184.9	259	85 - 117	191.3	3.38	20	SEO
Thallium	0.04353	0.00200	0.05	-0.000048	87.2	82 - 116	0.04172	4.24	20	
Vanadium	0.05184	0.00500	0.05	0.001331	101	86 - 115	0.05026	3.08	20	
Zinc	0.05668	0.00500	0.05	0.01475	83.9	83 - 119	0.05706	0.661	20	

PDS Sample ID: **HS20120908-03PDS** Units: **mg/L** Analysis Date: **05-Jan-2021 11:43**
Client ID: **18CPTMW10DW_121620** Run ID: **ICPMS05_375891** SeqNo: **5910259** PrepDate: **02-Jan-2021** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.27	0.100	1	0.2038	107	80 - 120				
Sodium	278.3	2.00	100	170.6	108	80 - 120				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20120908-03PDS** Units: **mg/L** Analysis Date: **04-Jan-2021 17:50**
Client ID: **18CPTMW10DW_121620** Run ID: **ICPMS05_375807** SeqNo: **5909500** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.08853	0.00500	0.1	0.000319	88.2	80 - 120				
Arsenic	0.1039	0.00500	0.1	0.001997	102	80 - 120				
Barium	0.2051	0.00500	0.1	0.1115	93.6	80 - 120				
Beryllium	0.116	0.00200	0.1	0.000036	116	80 - 120				
Cadmium	0.09371	0.00200	0.1	0.000038	93.7	80 - 120				
Calcium	19.42	0.500	10	9.644	97.7	80 - 120				
Chromium	0.1034	0.00500	0.1	0.006506	96.9	80 - 120				
Cobalt	0.09478	0.00500	0.1	0.000494	94.3	80 - 120				
Copper	0.0967	0.00500	0.1	0.002986	93.7	80 - 120				
Iron	12.72	0.200	10	3.277	94.4	80 - 120				
Lead	0.09315	0.00500	0.1	0.001627	91.5	80 - 120				
Magnesium	15.37	0.200	10	5.31	101	80 - 120				
Manganese	0.1621	0.00500	0.1	0.0679	94.2	80 - 120				
Nickel	0.09529	0.00500	0.1	0.001877	93.4	80 - 120				
Potassium	94.81	0.200	10	83.57	112	80 - 120				O
Selenium	0.1017	0.00500	0.1	0.000149	102	80 - 120				
Silver	0.08446	0.00500	0.1	-0.000302	84.8	80 - 120				
Thallium	0.09706	0.00200	0.1	-0.000048	97.1	80 - 120				
Vanadium	0.1008	0.00500	0.1	0.001331	99.5	80 - 120				
Zinc	0.1057	0.00500	0.1	0.01475	91.0	80 - 120				

SD Sample ID: **HS20120908-03SD** Units: **mg/L** Analysis Date: **05-Jan-2021 11:41**
Client ID: **18CPTMW10DW_121620** Run ID: **ICPMS05_375891** SeqNo: **5910258** PrepDate: **02-Jan-2021** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.3837	0.500					0.2038	0	10	J
Sodium	188.8	10.0					170.6	10.7	10	R

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20120908-03SD** Units: **mg/L** Analysis Date: **04-Jan-2021 17:44**
Client ID: **18CPTMW10DW_121620** Run ID: **ICPMS05_375807** SeqNo: **5909497** PrepDate: **02-Jan-2021** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	0.00500	0.0250					0.000319	0	10	U
Arsenic	0.002356	0.0250					0.001997	0	10	J
Barium	0.1123	0.0250					0.1115	0.699	10	
Beryllium	0.00250	0.0100					0.000036	0	10	U
Cadmium	0.00250	0.0100					0.000038	0	10	U
Calcium	9.959	2.50					9.644	3.28	10	
Chromium	0.006591	0.0250					0.006506	0	10	J
Cobalt	0.000504	0.0250					0.000494	0	10	J
Copper	0.0125	0.0250					0.002986	0	10	U
Iron	3.472	1.00					3.277	5.95	10	
Lead	0.00500	0.0250					0.001627	0	10	U
Magnesium	5.135	1.00					5.31	3.29	10	
Nickel	0.003158	0.0250					0.001877	0	10	J
Potassium	85.52	1.00					83.57	2.33	10	
Selenium	0.0125	0.0250					0.000149	0	10	U
Silver	0.00250	0.0250					-0.000302	0	10	U
Thallium	0.00250	0.0100					-0.000048	0	10	U
Vanadium	0.003036	0.0250					0.001331	0	10	J
Zinc	0.01112	0.0250					0.01475	0	10	J

The following samples were analyzed in this batch: HS20120908-01 HS20120908-03 HS20120908-05

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: 161269 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-161269** Units: **mg/L** Analysis Date: **04-Jan-2021 15:48**
Client ID: Run ID: **HG03_375805** SeqNo: **5908740** PrepDate: **04-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-161269** Units: **mg/L** Analysis Date: **04-Jan-2021 15:52**
Client ID: Run ID: **HG03_375805** SeqNo: **5908741** PrepDate: **04-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00485	0.000200	0.005	0	97.0	82 - 119				

MS Sample ID: **HS20120908-03MS** Units: **mg/L** Analysis Date: **04-Jan-2021 15:55**
Client ID: **18CPTMW10DW_121620** Run ID: **HG03_375805** SeqNo: **5908743** PrepDate: **04-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00475	0.000200	0.005	-0.000002000	95.0	82 - 119				

MSD Sample ID: **HS20120908-03MSD** Units: **mg/L** Analysis Date: **04-Jan-2021 15:57**
Client ID: **18CPTMW10DW_121620** Run ID: **HG03_375805** SeqNo: **5908744** PrepDate: **04-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00501	0.000200	0.005	-0.000002000	100	82 - 119	0.004750	5.33	20	

The following samples were analyzed in this batch: HS20120908-01 HS20120908-03 HS20120908-05

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: 160949 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 12:49**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903679** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.0598*	*0*	*0.08*	*0*	*74.8*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07037*	*0*	*0.08*	*0*	*88.0*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.0866*	*0*	*0.08*	*0*	*108*	*40 - 140*				

LCS Sample ID: **LCS-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 13:07**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903680** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.07018	0.010	0.08	0	87.7	40 - 140				
Surr: 2-Fluorobiphenyl	*0.06536*	*0*	*0.08*	*0*	*81.7*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07812*	*0*	*0.08*	*0*	*97.6*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.06385*	*0*	*0.08*	*0*	*79.8*	*40 - 140*				

LCSD Sample ID: **LCSD-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 13:24**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903681** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.06003	0.010	0.08	0	75.0	40 - 140	0.07018	15.6	20	
Surr: 2-Fluorobiphenyl	*0.059*	*0*	*0.08*	*0*	*73.8*	*40 - 140*	*0.06536*	*10.2*	*20*	
Surr: 4-Terphenyl-d14	*0.06912*	*0*	*0.08*	*0*	*86.4*	*40 - 140*	*0.07812*	*12.2*	*20*	
Surr: Nitrobenzene-d5	*0.05554*	*0*	*0.08*	*0*	*69.4*	*40 - 140*	*0.06385*	*13.9*	*20*	

The following samples were analyzed in this batch: HS20120908-01 HS20120908-02 HS20120908-04 HS20120908-05 HS20120908-06 HS20120908-07

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201229** Units: **ug/L** Analysis Date: **29-Dec-2020 12:54**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903411** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201229** Units: **ug/L** Analysis Date: **29-Dec-2020 12:54**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903411** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*42.24*	*1.0*	*50*	*0*	*84.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.31*	*1.0*	*50*	*0*	*96.6*	*85 - 114*				
Surr: Dibromofluoromethane	*43.76*	*1.0*	*50*	*0*	*87.5*	*80 - 119*				
Surr: Toluene-d8	*52.22*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201229** Units: **ug/L** Analysis Date: **29-Dec-2020 12:12**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903410** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.79	1.0	20	0	104	78 - 124				
1,1,1-Trichloroethane	20.72	1.0	20	0	104	74 - 131				
1,1,2,2-Tetrachloroethane	20.47	1.0	20	0	102	71 - 121				
1,1,2-Trichloroethane	20.91	1.0	20	0	105	80 - 119				
1,1-Dichloroethane	21.11	1.0	20	0	106	77 - 125				
1,1-Dichloroethene	19.47	1.0	20	0	97.4	71 - 131				
1,1-Dichloropropene	21.09	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	26.33	1.0	20	0	132	69 - 129				S
1,2,3-Trichloropropane	20.21	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	25.2	1.0	20	0	126	69 - 130				
1,2,4-Trimethylbenzene	21.46	1.0	20	0	107	76 - 124				
1,2-Dibromo-3-chloropropane	21.68	1.0	20	0	108	62 - 128				
1,2-Dibromoethane	21.28	1.0	20	0	106	77 - 121				
1,2-Dichlorobenzene	20.59	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	19.75	1.0	20	0	98.8	73 - 128				
1,2-Dichloropropane	21.39	1.0	20	0	107	78 - 122				
1,3,5-Trimethylbenzene	21.24	1.0	20	0	106	75 - 124				
1,3-Dichlorobenzene	20.82	1.0	20	0	104	80 - 119				
1,3-Dichloropropane	21.58	1.0	20	0	108	80 - 119				
1,4-Dichlorobenzene	21.04	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	21	1.0	20	0	105	60 - 139				
2-Butanone	46.78	2.0	40	0	117	56 - 143				
2-Chlorotoluene	21.78	1.0	20	0	109	79 - 122				
2-Hexanone	38.45	2.0	40	0	96.1	57 - 139				
4-Chlorotoluene	20.88	1.0	20	0	104	78 - 122				
4-Isopropyltoluene	21.76	1.0	20	0	109	77 - 127				
4-Methyl-2-pentanone	38.79	2.0	40	0	97.0	67 - 130				
Acetone	42.26	2.0	40	0	106	39 - 160				
Benzene	21.56	1.0	20	0	108	79 - 120				
Bromobenzene	20.29	1.0	20	0	101	80 - 120				
Bromochloromethane	20.96	1.0	20	0	105	78 - 123				
Bromodichloromethane	21.43	1.0	20	0	107	79 - 125				
Bromoform	21.83	1.0	20	0	109	66 - 130				
Bromomethane	24.87	1.0	20	0	124	53 - 141				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201229** Units: **ug/L** Analysis Date: **29-Dec-2020 12:12**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903410** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	45.24	2.0	40	0	113	64 - 133				
Carbon tetrachloride	22.32	1.0	20	0	112	72 - 136				
Chlorobenzene	20.13	1.0	20	0	101	82 - 118				
Chloroethane	18.97	1.0	20	0	94.9	60 - 138				
Chloroform	20.95	1.0	20	0	105	79 - 124				
Chloromethane	18.55	1.0	20	0	92.8	50 - 139				
cis-1,2-Dichloroethene	21.14	1.0	20	0	106	78 - 123				
cis-1,3-Dichloropropene	21.59	1.0	20	0	108	75 - 124				
Dibromochloromethane	21.14	1.0	20	0	106	74 - 126				
Dibromomethane	21.29	1.0	20	0	106	79 - 123				
Dichlorodifluoromethane	25.04	1.0	20	0	125	32 - 152				
Ethylbenzene	21.96	1.0	20	0	110	79 - 121				
Hexachlorobutadiene	26.32	1.0	20	0	132	66 - 134				
Isopropylbenzene	21.35	1.0	20	0	107	72 - 131				
m,p-Xylene	41.26	2.0	40	0	103	80 - 121				
Methylene chloride	21.78	2.0	20	0	109	74 - 124				
Naphthalene	23.98	1.0	20	0	120	61 - 128				
n-Butylbenzene	22.63	1.0	20	0	113	75 - 128				
n-Propylbenzene	21.59	1.0	20	0	108	76 - 126				
o-Xylene	20.42	1.0	20	0	102	78 - 122				
sec-Butylbenzene	21.7	1.0	20	0	109	77 - 126				
Styrene	20.74	1.0	20	0	104	78 - 123				
tert-Butylbenzene	21.48	1.0	20	0	107	78 - 124				
Tetrachloroethene	22.48	1.0	20	0	112	74 - 129				
Toluene	20.91	1.0	20	0	105	80 - 121				
trans-1,2-Dichloroethene	21.25	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	21.26	1.0	20	0	106	73 - 127				
Trichloroethene	20.38	1.0	20	0	102	79 - 123				
Trichlorofluoromethane	19.22	1.0	20	0	96.1	65 - 141				
Vinyl chloride	21.02	1.0	20	0	105	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.72*	*1.0*	*50*	*0*	*97.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.47*	*1.0*	*50*	*0*	*105*	*85 - 114*				
Surr: Dibromofluoromethane	*50.1*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*49.92*	*1.0*	*50*	*0*	*99.8*	*89 - 112*				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120972-07MS** Units: **ug/L** Analysis Date: **29-Dec-2020 15:21**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903418** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.42	1.0	20	0	102	78 - 124				
1,1,1-Trichloroethane	19.25	1.0	20	0	96.3	74 - 131				
1,1,2,2-Tetrachloroethane	18.98	1.0	20	0	94.9	71 - 121				
1,1,2-Trichloroethane	19.36	1.0	20	0	96.8	80 - 119				
1,1-Dichloroethane	17.75	1.0	20	0	88.8	77 - 125				
1,1-Dichloroethene	17.59	1.0	20	0	88.0	71 - 131				
1,1-Dichloropropene	21.05	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	17.8	1.0	20	0	89.0	69 - 129				
1,2,3-Trichloropropane	17.72	1.0	20	0	88.6	73 - 122				
1,2,4-Trichlorobenzene	19.28	1.0	20	0	96.4	69 - 130				
1,2,4-Trimethylbenzene	20.77	1.0	20	0	104	76 - 124				
1,2-Dibromo-3-chloropropane	17.08	1.0	20	0	85.4	62 - 128				
1,2-Dibromoethane	19.44	1.0	20	0	97.2	77 - 121				
1,2-Dichlorobenzene	18.87	1.0	20	0	94.4	80 - 119				
1,2-Dichloroethane	18.23	1.0	20	0	91.1	73 - 128				
1,2-Dichloropropane	19.49	1.0	20	0	97.5	78 - 122				
1,3,5-Trimethylbenzene	20.56	1.0	20	0	103	75 - 124				
1,3-Dichlorobenzene	19.72	1.0	20	0	98.6	80 - 119				
1,3-Dichloropropane	19.55	1.0	20	0	97.7	80 - 119				
1,4-Dichlorobenzene	19.59	1.0	20	0	97.9	79 - 118				
2,2-Dichloropropane	18.89	1.0	20	0	94.4	60 - 139				
2-Butanone	32.24	2.0	40	0	80.6	56 - 143				
2-Chlorotoluene	21.29	1.0	20	0	106	79 - 122				
2-Hexanone	32.94	2.0	40	0	82.3	57 - 139				
4-Chlorotoluene	20.67	1.0	20	0	103	78 - 122				
4-Isopropyltoluene	20.66	1.0	20	0	103	77 - 127				
4-Methyl-2-pentanone	33.52	2.0	40	0	83.8	67 - 130				
Acetone	23.27	2.0	40	0	58.2	39 - 160				
Benzene	19.83	1.0	20	0	99.2	79 - 120				
Bromobenzene	20.09	1.0	20	0	100	80 - 120				
Bromochloromethane	18.05	1.0	20	0	90.3	78 - 123				
Bromodichloromethane	19.62	1.0	20	0	98.1	79 - 125				
Bromoform	19.54	1.0	20	0	97.7	66 - 130				
Bromomethane	19.24	1.0	20	0	96.2	53 - 141				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120972-07MS** Units: **ug/L** Analysis Date: **29-Dec-2020 15:21**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903418** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.34	2.0	40	0	103	64 - 133				
Carbon tetrachloride	22.35	1.0	20	0	112	72 - 136				
Chlorobenzene	19.86	1.0	20	0	99.3	82 - 118				
Chloroethane	15.84	1.0	20	0	79.2	60 - 138				
Chloroform	18.18	1.0	20	0	90.9	79 - 124				
Chloromethane	13.62	1.0	20	0	68.1	50 - 139				
cis-1,2-Dichloroethene	19.05	1.0	20	0	95.2	78 - 123				
cis-1,3-Dichloropropene	19.3	1.0	20	0	96.5	75 - 124				
Dibromochloromethane	19.62	1.0	20	0	98.1	74 - 126				
Dibromomethane	19.17	1.0	20	0	95.8	79 - 123				
Dichlorodifluoromethane	15.55	1.0	20	0	77.7	32 - 152				
Ethylbenzene	20.6	1.0	20	0	103	79 - 121				
Hexachlorobutadiene	25.29	1.0	20	0	126	66 - 134				
Isopropylbenzene	20.61	1.0	20	0	103	72 - 131				
m,p-Xylene	40.47	2.0	40	0	101	80 - 121				
Methylene chloride	17.47	2.0	20	0	87.3	74 - 124				
Naphthalene	15.15	1.0	20	0	75.7	61 - 128				
n-Butylbenzene	21.83	1.0	20	0	109	75 - 128				
n-Propylbenzene	21.01	1.0	20	0	105	76 - 126				
o-Xylene	19.63	1.0	20	0	98.1	78 - 122				
sec-Butylbenzene	21.41	1.0	20	0	107	77 - 126				
Styrene	20.01	1.0	20	0	100	78 - 123				
tert-Butylbenzene	21.13	1.0	20	0	106	78 - 124				
Tetrachloroethene	21.97	1.0	20	0	110	74 - 129				
Toluene	20.77	1.0	20	0	104	80 - 121				
trans-1,2-Dichloroethene	18.52	1.0	20	0	92.6	75 - 124				
trans-1,3-Dichloropropene	18.49	1.0	20	0	92.5	73 - 127				
Trichloroethene	21.16	1.0	20	0	106	79 - 123				
Trichlorofluoromethane	17.99	1.0	20	0	89.9	65 - 141				
Vinyl chloride	18.18	1.0	20	0	90.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*43.76*	*1.0*	*50*	*0*	*87.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.42*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*45.34*	*1.0*	*50*	*0*	*90.7*	*80 - 119*				
Surr: Toluene-d8	*51.03*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120908-03MS** Units: **ug/L** Analysis Date: **29-Dec-2020 16:03**
Client ID: **18CPTMW10DW_121620** Run ID: **VOA6_375590** SeqNo: **5903420** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.61	1.0	20	0	108	78 - 124				
1,1,1-Trichloroethane	20.04	1.0	20	0	100	74 - 131				
1,1,2,2-Tetrachloroethane	21.51	1.0	20	0	108	71 - 121				
1,1,2-Trichloroethane	19.85	1.0	20	0	99.3	80 - 119				
1,1-Dichloroethane	18.66	1.0	20	0	93.3	77 - 125				
1,1-Dichloroethene	18.81	1.0	20	0	94.1	71 - 131				
1,1-Dichloropropene	21.61	1.0	20	0	108	78 - 125				
1,2,3-Trichlorobenzene	22.76	1.0	20	0	114	69 - 129				
1,2,3-Trichloropropane	19.83	1.0	20	0	99.2	73 - 122				
1,2,4-Trichlorobenzene	23.03	1.0	20	0	115	69 - 130				
1,2,4-Trimethylbenzene	23.43	1.0	20	0	117	76 - 124				
1,2-Dibromo-3-chloropropane	21.68	1.0	20	0	108	62 - 128				
1,2-Dibromoethane	20.03	1.0	20	0	100	77 - 121				
1,2-Dichlorobenzene	21.49	1.0	20	0	107	80 - 119				
1,2-Dichloroethane	18.99	1.0	20	0	95.0	73 - 128				
1,2-Dichloropropane	20.59	1.0	20	0	103	78 - 122				
1,3,5-Trimethylbenzene	22.83	1.0	20	0	114	75 - 124				
1,3-Dichlorobenzene	22.46	1.0	20	0	112	80 - 119				
1,3-Dichloropropane	20.32	1.0	20	0	102	80 - 119				
1,4-Dichlorobenzene	22.68	1.0	20	0	113	79 - 118				
2,2-Dichloropropane	19.61	1.0	20	0	98.1	60 - 139				
2-Butanone	32.64	2.0	40	0	81.6	56 - 143				
2-Chlorotoluene	24.08	1.0	20	0	120	79 - 122				
2-Hexanone	33.32	2.0	40	0	83.3	57 - 139				
4-Chlorotoluene	23.06	1.0	20	0	115	78 - 122				
4-Isopropyltoluene	22.35	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	34.15	2.0	40	0	85.4	67 - 130				
Acetone	23.26	2.0	40	0	58.1	39 - 160				
Benzene	20.79	1.0	20	0	104	79 - 120				
Bromobenzene	22.25	1.0	20	0	111	80 - 120				
Bromochloromethane	18.74	1.0	20	0	93.7	78 - 123				
Bromodichloromethane	20.23	1.0	20	0	101	79 - 125				
Bromoform	20.19	1.0	20	0	101	66 - 130				
Bromomethane	18.69	1.0	20	0	93.4	53 - 141				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120908-03MS** Units: **ug/L** Analysis Date: **29-Dec-2020 16:03**
Client ID: **18CPTMW10DW_121620** Run ID: **VOA6_375590** SeqNo: **5903420** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	43.17	2.0	40	0	108	64 - 133				
Carbon tetrachloride	24.25	1.0	20	0	121	72 - 136				
Chlorobenzene	20.62	1.0	20	0	103	82 - 118				
Chloroethane	17.85	1.0	20	0	89.3	60 - 138				
Chloroform	19.02	1.0	20	0	95.1	79 - 124				
Chloromethane	15.16	1.0	20	0	75.8	50 - 139				
cis-1,2-Dichloroethene	19.69	1.0	20	0	98.4	78 - 123				
cis-1,3-Dichloropropene	19.93	1.0	20	0	99.7	75 - 124				
Dibromochloromethane	20.03	1.0	20	0	100	74 - 126				
Dibromomethane	19.64	1.0	20	0	98.2	79 - 123				
Dichlorodifluoromethane	17.3	1.0	20	0	86.5	32 - 152				
Ethylbenzene	22.11	1.0	20	0	111	79 - 121				
Hexachlorobutadiene	24.37	1.0	20	0	122	66 - 134				
Isopropylbenzene	22.36	1.0	20	0	112	72 - 131				
m,p-Xylene	43.27	2.0	40	0	108	80 - 121				
Methylene chloride	18.38	2.0	20	0	91.9	74 - 124				
Naphthalene	19.85	1.0	20	0	99.3	61 - 128				
n-Butylbenzene	23.03	1.0	20	0	115	75 - 128				
n-Propylbenzene	23.56	1.0	20	0	118	76 - 126				
o-Xylene	20.73	1.0	20	0	104	78 - 122				
sec-Butylbenzene	23.25	1.0	20	0	116	77 - 126				
Styrene	20.65	1.0	20	0	103	78 - 123				
tert-Butylbenzene	23.48	1.0	20	0	117	78 - 124				
Tetrachloroethene	23.26	1.0	20	0	116	74 - 129				
Toluene	21.37	1.0	20	0	107	80 - 121				
trans-1,2-Dichloroethene	19.8	1.0	20	0	99.0	75 - 124				
trans-1,3-Dichloropropene	19.76	1.0	20	0	98.8	73 - 127				
Trichloroethene	21.32	1.0	20	1.071	101	79 - 123				
Trichlorofluoromethane	18.81	1.0	20	0	94.1	65 - 141				
Vinyl chloride	19.19	1.0	20	0	95.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*42.5*	*1.0*	*50*	*0*	*85.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.25*	*1.0*	*50*	*0*	*98.5*	*85 - 114*				
Surr: Dibromofluoromethane	*44.88*	*1.0*	*50*	*0*	*89.8*	*80 - 119*				
Surr: Toluene-d8	*50.99*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120972-07MSD** Units: **ug/L** Analysis Date: **29-Dec-2020 15:42**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903419** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.08	1.0	20	0	100	78 - 124	20.42	1.68	20	
1,1,1-Trichloroethane	18.46	1.0	20	0	92.3	74 - 131	19.25	4.24	20	
1,1,2,2-Tetrachloroethane	20.98	1.0	20	0	105	71 - 121	18.98	10.1	20	
1,1,2-Trichloroethane	19.95	1.0	20	0	99.7	80 - 119	19.36	2.98	20	
1,1-Dichloroethane	17.39	1.0	20	0	86.9	77 - 125	17.75	2.07	20	
1,1-Dichloroethene	16.82	1.0	20	0	84.1	71 - 131	17.59	4.47	20	
1,1-Dichloropropene	20.46	1.0	20	0	102	78 - 125	21.05	2.84	20	
1,2,3-Trichlorobenzene	23.72	1.0	20	0	119	69 - 129	17.8	28.5	20	R
1,2,3-Trichloropropane	19.63	1.0	20	0	98.1	73 - 122	17.72	10.2	20	
1,2,4-Trichlorobenzene	22.98	1.0	20	0	115	69 - 130	19.28	17.5	20	
1,2,4-Trimethylbenzene	21.09	1.0	20	0	105	76 - 124	20.77	1.51	20	
1,2-Dibromo-3-chloropropane	21.69	1.0	20	0	108	62 - 128	17.08	23.8	20	R
1,2-Dibromoethane	19.83	1.0	20	0	99.1	77 - 121	19.44	1.96	20	
1,2-Dichlorobenzene	20.66	1.0	20	0	103	80 - 119	18.87	9.02	20	
1,2-Dichloroethane	18.42	1.0	20	0	92.1	73 - 128	18.23	1.06	20	
1,2-Dichloropropane	19.93	1.0	20	0	99.6	78 - 122	19.49	2.2	20	
1,3,5-Trimethylbenzene	21.01	1.0	20	0	105	75 - 124	20.56	2.18	20	
1,3-Dichlorobenzene	20.57	1.0	20	0	103	80 - 119	19.72	4.21	20	
1,3-Dichloropropane	19.9	1.0	20	0	99.5	80 - 119	19.55	1.81	20	
1,4-Dichlorobenzene	20.71	1.0	20	0	104	79 - 118	19.59	5.58	20	
2,2-Dichloropropane	17.83	1.0	20	0	89.2	60 - 139	18.89	5.76	20	
2-Butanone	32.11	2.0	40	0	80.3	56 - 143	32.24	0.401	20	
2-Chlorotoluene	21.95	1.0	20	0	110	79 - 122	21.29	3.05	20	
2-Hexanone	35.36	2.0	40	0	88.4	57 - 139	32.94	7.09	20	
4-Chlorotoluene	21.01	1.0	20	0	105	78 - 122	20.67	1.61	20	
4-Isopropyltoluene	20.48	1.0	20	0	102	77 - 127	20.66	0.873	20	
4-Methyl-2-pentanone	35.71	2.0	40	0	89.3	67 - 130	33.52	6.31	20	
Acetone	24.02	2.0	40	0	60.1	39 - 160	23.27	3.19	20	
Benzene	19.67	1.0	20	0	98.4	79 - 120	19.83	0.824	20	
Bromobenzene	20.99	1.0	20	0	105	80 - 120	20.09	4.37	20	
Bromochloromethane	17.37	1.0	20	0	86.8	78 - 123	18.05	3.89	20	
Bromodichloromethane	19.67	1.0	20	0	98.3	79 - 125	19.62	0.243	20	
Bromoform	20.52	1.0	20	0	103	66 - 130	19.54	4.92	20	
Bromomethane	18.05	1.0	20	0	90.3	53 - 141	19.24	6.37	20	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120972-07MSD** Units: **ug/L** Analysis Date: **29-Dec-2020 15:42**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903419** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	39.61	2.0	40	0	99.0	64 - 133	41.34	4.27	20	
Carbon tetrachloride	21.65	1.0	20	0	108	72 - 136	22.35	3.19	20	
Chlorobenzene	19.6	1.0	20	0	98.0	82 - 118	19.86	1.32	20	
Chloroethane	16.53	1.0	20	0	82.7	60 - 138	15.84	4.26	20	
Chloroform	18.01	1.0	20	0	90.1	79 - 124	18.18	0.922	20	
Chloromethane	13.39	1.0	20	0	66.9	50 - 139	13.62	1.74	20	
cis-1,2-Dichloroethene	18.34	1.0	20	0	91.7	78 - 123	19.05	3.79	20	
cis-1,3-Dichloropropene	19.34	1.0	20	0	96.7	75 - 124	19.3	0.212	20	
Dibromochloromethane	19.93	1.0	20	0	99.6	74 - 126	19.62	1.53	20	
Dibromomethane	19.81	1.0	20	0	99.0	79 - 123	19.17	3.31	20	
Dichlorodifluoromethane	15.49	1.0	20	0	77.5	32 - 152	15.55	0.351	20	
Ethylbenzene	21.31	1.0	20	0	107	79 - 121	20.6	3.4	20	
Hexachlorobutadiene	25.82	1.0	20	0	129	66 - 134	25.29	2.07	20	
Isopropylbenzene	20.47	1.0	20	0	102	72 - 131	20.61	0.684	20	
m,p-Xylene	40.74	2.0	40	0	102	80 - 121	40.47	0.684	20	
Methylene chloride	17.65	2.0	20	0	88.2	74 - 124	17.47	1.01	20	
Naphthalene	20.85	1.0	20	0	104	61 - 128	15.15	31.7	20	R
n-Butylbenzene	21.31	1.0	20	0	107	75 - 128	21.83	2.38	20	
n-Propylbenzene	21.14	1.0	20	0	106	76 - 126	21.01	0.607	20	
o-Xylene	19.72	1.0	20	0	98.6	78 - 122	19.63	0.481	20	
sec-Butylbenzene	21.43	1.0	20	0	107	77 - 126	21.41	0.0823	20	
Styrene	19.43	1.0	20	0	97.2	78 - 123	20.01	2.9	20	
tert-Butylbenzene	21.49	1.0	20	0	107	78 - 124	21.13	1.68	20	
Tetrachloroethene	21.31	1.0	20	0	107	74 - 129	21.97	3.06	20	
Toluene	20.2	1.0	20	0	101	80 - 121	20.77	2.76	20	
trans-1,2-Dichloroethene	18.02	1.0	20	0	90.1	75 - 124	18.52	2.76	20	
trans-1,3-Dichloropropene	18.94	1.0	20	0	94.7	73 - 127	18.49	2.4	20	
Trichloroethene	19.61	1.0	20	0	98.1	79 - 123	21.16	7.58	20	
Trichlorofluoromethane	17.03	1.0	20	0	85.2	65 - 141	17.99	5.45	20	
Vinyl chloride	17.04	1.0	20	0	85.2	58 - 137	18.18	6.49	20	
Surr: 1,2-Dichloroethane-d4	*41.92*	*1.0*	*50*	*0*	*83.8*	*81 - 118*	*43.76*	*4.3*	*20*	
Surr: 4-Bromofluorobenzene	*50*	*1.0*	*50*	*0*	*100.0*	*85 - 114*	*51.42*	*2.8*	*20*	
Surr: Dibromofluoromethane	*43.54*	*1.0*	*50*	*0*	*87.1*	*80 - 119*	*45.34*	*4.04*	*20*	
Surr: Toluene-d8	*51*	*1.0*	*50*	*0*	*102*	*89 - 112*	*51.03*	*0.0545*	*20*	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120908-03MSD** Units: **ug/L** Analysis Date: **29-Dec-2020 16:25**
Client ID: **18CPTMW10DW_121620** Run ID: **VOA6_375590** SeqNo: **5903421** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.73	1.0	20	0	104	78 - 124	21.61	4.14	20	
1,1,1-Trichloroethane	19.26	1.0	20	0	96.3	74 - 131	20.04	3.96	20	
1,1,2,2-Tetrachloroethane	20.8	1.0	20	0	104	71 - 121	21.51	3.35	20	
1,1,2-Trichloroethane	20.46	1.0	20	0	102	80 - 119	19.85	3.03	20	
1,1-Dichloroethane	18.24	1.0	20	0	91.2	77 - 125	18.66	2.25	20	
1,1-Dichloroethene	17.06	1.0	20	0	85.3	71 - 131	18.81	9.81	20	
1,1-Dichloropropene	20.46	1.0	20	0	102	78 - 125	21.61	5.49	20	
1,2,3-Trichlorobenzene	22.38	1.0	20	0	112	69 - 129	22.76	1.67	20	
1,2,3-Trichloropropane	20.3	1.0	20	0	102	73 - 122	19.83	2.33	20	
1,2,4-Trichlorobenzene	21.91	1.0	20	0	110	69 - 130	23.03	4.96	20	
1,2,4-Trimethylbenzene	22.2	1.0	20	0	111	76 - 124	23.43	5.38	20	
1,2-Dibromo-3-chloropropane	19.92	1.0	20	0	99.6	62 - 128	21.68	8.42	20	
1,2-Dibromoethane	19.5	1.0	20	0	97.5	77 - 121	20.03	2.66	20	
1,2-Dichlorobenzene	21.13	1.0	20	0	106	80 - 119	21.49	1.67	20	
1,2-Dichloroethane	18.74	1.0	20	0	93.7	73 - 128	18.99	1.35	20	
1,2-Dichloropropane	19.86	1.0	20	0	99.3	78 - 122	20.59	3.61	20	
1,3,5-Trimethylbenzene	22.03	1.0	20	0	110	75 - 124	22.83	3.59	20	
1,3-Dichlorobenzene	21.32	1.0	20	0	107	80 - 119	22.46	5.2	20	
1,3-Dichloropropane	20.35	1.0	20	0	102	80 - 119	20.32	0.135	20	
1,4-Dichlorobenzene	21.54	1.0	20	0	108	79 - 118	22.68	5.19	20	
2,2-Dichloropropane	18.64	1.0	20	0	93.2	60 - 139	19.61	5.1	20	
2-Butanone	34.16	2.0	40	0	85.4	56 - 143	32.64	4.54	20	
2-Chlorotoluene	22.79	1.0	20	0	114	79 - 122	24.08	5.5	20	
2-Hexanone	34.09	2.0	40	0	85.2	57 - 139	33.32	2.29	20	
4-Chlorotoluene	22.32	1.0	20	0	112	78 - 122	23.06	3.27	20	
4-Isopropyltoluene	22.23	1.0	20	0	111	77 - 127	22.35	0.526	20	
4-Methyl-2-pentanone	36.55	2.0	40	0	91.4	67 - 130	34.15	6.8	20	
Acetone	24	2.0	40	0	60.0	39 - 160	23.26	3.13	20	
Benzene	19.98	1.0	20	0	99.9	79 - 120	20.79	3.98	20	
Bromobenzene	21.59	1.0	20	0	108	80 - 120	22.25	3.02	20	
Bromochloromethane	18.37	1.0	20	0	91.8	78 - 123	18.74	2.01	20	
Bromodichloromethane	20.76	1.0	20	0	104	79 - 125	20.23	2.58	20	
Bromoform	20.44	1.0	20	0	102	66 - 130	20.19	1.22	20	
Bromomethane	18	1.0	20	0	90.0	53 - 141	18.69	3.75	20	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20120908-03MSD** Units: **ug/L** Analysis Date: **29-Dec-2020 16:25**
Client ID: **18CPTMW10DW_121620** Run ID: **VOA6_375590** SeqNo: **5903421** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	40.55	2.0	40	0	101	64 - 133	43.17	6.25	20	
Carbon tetrachloride	22.86	1.0	20	0	114	72 - 136	24.25	5.91	20	
Chlorobenzene	19.97	1.0	20	0	99.8	82 - 118	20.62	3.2	20	
Chloroethane	20.92	1.0	20	0	105	60 - 138	17.85	15.8	20	
Chloroform	18.17	1.0	20	0	90.9	79 - 124	19.02	4.54	20	
Chloromethane	14.45	1.0	20	0	72.3	50 - 139	15.16	4.82	20	
cis-1,2-Dichloroethene	18.35	1.0	20	0	91.8	78 - 123	19.69	7.02	20	
cis-1,3-Dichloropropene	20	1.0	20	0	100	75 - 124	19.93	0.338	20	
Dibromochloromethane	20.08	1.0	20	0	100	74 - 126	20.03	0.283	20	
Dibromomethane	20.03	1.0	20	0	100	79 - 123	19.64	1.95	20	
Dichlorodifluoromethane	16.35	1.0	20	0	81.7	32 - 152	17.3	5.67	20	
Ethylbenzene	21.37	1.0	20	0	107	79 - 121	22.11	3.4	20	
Hexachlorobutadiene	23.53	1.0	20	0	118	66 - 134	24.37	3.5	20	
Isopropylbenzene	21.23	1.0	20	0	106	72 - 131	22.36	5.17	20	
m,p-Xylene	40.99	2.0	40	0	102	80 - 121	43.27	5.41	20	
Methylene chloride	17.86	2.0	20	0	89.3	74 - 124	18.38	2.9	20	
Naphthalene	20.95	1.0	20	0	105	61 - 128	19.85	5.36	20	
n-Butylbenzene	22.66	1.0	20	0	113	75 - 128	23.03	1.62	20	
n-Propylbenzene	22.54	1.0	20	0	113	76 - 126	23.56	4.42	20	
o-Xylene	20.15	1.0	20	0	101	78 - 122	20.73	2.85	20	
sec-Butylbenzene	22.57	1.0	20	0	113	77 - 126	23.25	2.98	20	
Styrene	19.94	1.0	20	0	99.7	78 - 123	20.65	3.53	20	
tert-Butylbenzene	22.59	1.0	20	0	113	78 - 124	23.48	3.87	20	
Tetrachloroethene	21.97	1.0	20	0	110	74 - 129	23.26	5.68	20	
Toluene	20.74	1.0	20	0	104	80 - 121	21.37	3	20	
trans-1,2-Dichloroethene	18.56	1.0	20	0	92.8	75 - 124	19.8	6.46	20	
trans-1,3-Dichloropropene	19.28	1.0	20	0	96.4	73 - 127	19.76	2.47	20	
Trichloroethene	20.89	1.0	20	1.071	99.1	79 - 123	21.32	2.03	20	
Trichlorofluoromethane	17.27	1.0	20	0	86.4	65 - 141	18.81	8.56	20	
Vinyl chloride	18.38	1.0	20	0	91.9	58 - 137	19.19	4.32	20	
Surr: 1,2-Dichloroethane-d4	*41.62*	*1.0*	*50*	*0*	*83.2*	*81 - 118*	*42.5*	*2.11*	*20*	
Surr: 4-Bromofluorobenzene	*48.97*	*1.0*	*50*	*0*	*97.9*	*85 - 114*	*49.25*	*0.566*	*20*	
Surr: Dibromofluoromethane	*44.72*	*1.0*	*50*	*0*	*89.4*	*80 - 119*	*44.88*	*0.352*	*20*	
Surr: Toluene-d8	*50.61*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.99*	*0.742*	*20*	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20120908

QC BATCH REPORT

Batch ID: R375590 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20120908-01	HS20120908-02	HS20120908-03	HS20120908-04
HS20120908-05	HS20120908-06	HS20120908-08	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: **HS20120908**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20120908

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20120908-01	MW9_121620	Login	12/17/2020 2:26:28 PM	NDR	Sub
HS20120908-01	MW9_121620	Login	12/17/2020 2:26:28 PM	NDR	MET034
HS20120908-01	MW9_121620	Login	12/17/2020 2:26:28 PM	NDR	EXT150
HS20120908-01	MW9_121620	Login	12/17/2020 2:26:28 PM	NDR	VOA136
HS20120908-02	18CPTMW10SW_121620	Login	12/17/2020 2:26:28 PM	NDR	Sub
HS20120908-02	18CPTMW10SW_121620	Login	12/17/2020 2:26:28 PM	NDR	EXT150
HS20120908-02	18CPTMW10SW_121620	Login	12/17/2020 2:26:28 PM	NDR	VOA136
HS20120908-03	18CPTMW10DW_121620	Login	12/17/2020 2:26:28 PM	NDR	MET034
HS20120908-03	18CPTMW10DW_121620	Login	12/17/2020 2:26:28 PM	NDR	Sub
HS20120908-03	18CPTMW10DW_121620	Login	12/17/2020 2:26:28 PM	NDR	VOA136

ALS Houston, US Date: 05-Jan-21

Sample Receipt Checklist

Work Order ID: HS20120908 **Date/Time Received:** 17-Dec-2020 11:10

Client Name: Bhate Environmental **Received by:** Pablo Marinez

Completed By:	/S/ Nilesh D. Ranchod	17-Dec-2020 16:46	**Reviewed by:**	/S/ Corey Grandits	18-Dec-2020 09:28
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.9°C UC/C-	IR31
Cooler(s)/Kit(s):	43020	
Date/Time sample(s) sent to storage:	12/17/2020 18:00	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate ENVIRONMENTAL CORPORATION

Page: ____ of ____

Project/Phase No: NWO1312.0150

COC Number(1): ____

LIMS Number: ____

1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS	1, 4 - DIOXANE						Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
							Sample Analysis Requested (5)										Quality Assurance Samples (6)			
MW9-121620	16 Dec 2020	0735	-		N	WG	6	X	X	X	X									
18CPTMW10SW-121620	16 DEC 2020	0825	-		N	WG	5	X	X		X									
18CPTMW10DW-121620	16 DEC 2020	0910	-		N	WG	5	X	X	X										
18CPTMW10DW-121620-MS	16 DEC 2020	0910			MS	WG	5	X	X	X										
18CPTMW10DW-121620-MSD	16 DEC 2020	0910			SD	WG	5	X	X	X										
18WW06-121620	16 DEC 2020	1000	-		N	WG	5	X	X		X									
18WW02-121620	16 DEC 2020	1045	-		N	WG	6	X	X	X	X									
18WW10-121620	16 DEC 2020	1150	-		N	WG	5	X	X		X									
MW17-121620	16 DEC 2020	1235	-		N	WG	2		X		X									
TRIP BLANK	16 DEC 2020		-		TB	W	2	X												
			-																	

COMMENTS: ____

HS20120908

Bhate Environmental Associates, Inc.
LHAAP 18 24

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	12/16/20	1430	1. NA	12/17/20	11:10
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: ____ Shipped ____ No.:

Method of Shipment: ____

Fed Ex ____ Airbill Number: ____

Analytical Lab: ALS 10450 Stanhill Rd Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

430 20 Temp Blk 0.4

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

43020

CUSTODY SEAL

Date: 12/16/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By: SMY
Date: 12/17/20

43020 DEC 17 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

43020

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09NOV20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 26x14x14 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP - 18/24 - SD - 74789 - RJ
RMA: [illegible]

FedEx Express

FedEx
TRK# 0221 1891 8882 6066

THU - 17 DEC AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

December 30, 2020 Service Request No:E2001238

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20120908

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 18, 2020
For your reference, these analyses have been assigned our service request number **E2001238.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001238
Project:	HS20120908	**Date Received:**	12/18/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Seven samples were received for analysis at ALS Environmental in Houston on 12/18/20.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000704: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS, DLCS, MS, & MSD recoveries are within QC limits.

Samples E2001238-002/-003/-004/-006/-007 were analyzed at a dilution due to matrix interference with the Internal Standard at a 1x DF.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for

which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001238
Project: HS20120908

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001238-001	MW9_121620	12/16/2020	0735
E2001238-002	18CPTMW10SW_121620	12/16/2020	0825
E2001238-003	18CPTMW10DW_121620	12/16/2020	0910
E2001238-004	18WW06_121620	12/16/2020	1000
E2001238-005	18WW02_121620	12/16/2020	1045
E2001238-006	18WW10_121620	12/16/2020	1150
E2001238-007	MW17_121620	12/16/2020	1235

Service Request Summary

Folder #: **E2001238**
Client Name: ALS Environmental - US
Project Name: HS20120908
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/18/20
Internal Due Date: 1/4/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120908
EDD: No EDD Specified

9 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001238-001	MW9_121620	Ground Water	12/16/20 0735	**IV**
E2001238-002	18CPTMW10SW_121620	Ground Water	12/16/20 0825	**IV**
E2001238-003	18CPTMW10DW_121620	Ground Water	12/16/20 0910	**IV**
E2001238-004	18WW06_121620	Ground Water	12/16/20 1000	**IV**
E2001238-005	18WW02_121620	Ground Water	12/16/20 1045	**IV**
E2001238-006	18WW10_121620	Ground Water	12/16/20 1150	**IV**
E2001238-007	MW17_121620	Ground Water	12/16/20 1235	**IV**

Service Request Summary

Folder #: **E2001238**
Client Name: ALS Environmental - US
Project Name: HS20120908
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
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Project Chemist: Corey Grandits
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Logged By: CGRANDITS
Date Received: 12/18/20
Internal Due Date: 1/4/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20120908
EDD: No EDD Specified

9 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	6	level II 1/4,level IV due 1/11
Semivoa GCMS	ClO4 DOD/6850	1	MS/MSD

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

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Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15358**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20120908
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20120908-01**	**MW9_121620**	**Groundwater**	**16 Dec 2020 07:35**
	Provide Level II and Level IV reports in separate pdf			04 Jan 2021
2.	**HS20120908-02**	**18CPTMW10SW_121620**	**Groundwater**	**16 Dec 2020 08:25**
	Provide Level II and Level IV reports in separate pdf			04 Jan 2021
3.	**HS20120908-03**	**18CPTMW10DW_121620**	**Groundwater**	**16 Dec 2020 09:10**
	Provide Level II and Level IV reports in separate pdf			04 Jan 2021
4.	**HS20120908-04**	**18WW06_121620**	**Groundwater**	**16 Dec 2020 10:00**
	Provide Level II and Level IV reports in separate pdf			04 Jan 2021
5.	**HS20120908-05**	**18WW02_121620**	**Groundwater**	**16 Dec 2020 10:45**
	Provide Level II and Level IV reports in separate pdf			04 Jan 2021
6.	**HS20120908-06**	**18WW10_121620**	**Groundwater**	**16 Dec 2020 11:50**
	Provide Level II and Level IV reports in separate pdf			04 Jan 2021
7.	**HS20120908-07**	**MW-17_121620**	**Groundwater**	**16 Dec 2020 12:35**
	Provide Level II and Level IV reports in separate pdf			04 Jan 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

RIGHT SOLUTIONS

17 Dec 2020

MS/MSD - HS20120908-03

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15358**

QC Level: DOD IV (DoD Data Package)

Relinquished By:	NR	Date/Time:	
Received By:	[illegible]	Date/Time:	12/18/20 1151
Cooler ID(s):		Temperature(s):	

ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-H

Thermometer ID IR25

Date/Time Received: 12/18/20 Initials: CG Date/Time Logged in: 12/18/20 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?
Were they intact? ○ Yes ○ No ✓ N/A
Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/18/20	1151	CG	1.1	☐
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371929 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/22/20 09:11

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001238-001	MW9_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2001238-002	18CPTMW10SW_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2001238-003	18CPTMW10DW_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2001238-004	18WW06_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001238-005	18WW02_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001238-006	18WW10_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001238-007	MW17_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001242-001	MW-8_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001242-002	MW-18_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001242-003	MW-18_12172020_a	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001242-004	C08_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001242-005	125_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001242-006	126_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001242-007	C09_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001242-008	C09_12172020_a	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001242-009	18CPTMW16_121720	.01	6850/ClO4 DOD			Ground Water	10mL	
17	EQ2000704-01	MB		6850/ClO4 DOD			Liquid	10mL	
18	EQ2000704-02	LCS		6850/ClO4 DOD			Liquid	10mL	
19	EQ2000704-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000704-04	18CPTMW10DW_121620 MS	.01	6850/ClO4 DOD			Liquid	10mL	
21	EQ2000704-05	18CPTMW10DW_121620 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000704-02	1.00µL	EQ2000704-03	1.00µL	EQ2000704-04	1.00µL	EQ2000704-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001238-001	100.00µL	E2001238-002	100.00µL	E2001238-003	100.00µL	E2001238-004	100.00µL	E2001238-005	100.00µL	E2001238-006	100.00µL
E2001238-007	100.00µL	E2001242-001	100.00µL	E2001242-002	100.00µL	E2001242-003	100.00µL	E2001242-004	100.00µL	E2001242-005	100.00µL
E2001242-006	100.00µL	E2001242-007	100.00µL	E2001242-008	100.00µL	E2001242-009	100.00µL	EQ2000704-01	100.00µL	EQ2000704-02	100.00µL
EQ2000704-03	100.00µL	EQ2000704-04	100.00µL	EQ2000704-05	100.00µL						

Preparation Information Benchsheet

Prep Run#: 371929 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/22/20 09:11

Preparation Steps

Step: Preparation
Started: 12/22/20 09:11
Finished: 12/22/20 14:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/22/20

Chain of Custody

Relinquished By:		Date:		Extracts Examined
Received By:		Date:		Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 0735
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	MW9_121620	**Units:**	µg/L
Lab Code:	E2001238-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**254**		1.00	0.500	0.250	10	12/22/20	12/29/20 18:22	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 0825
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	18CPTMW10SW_121620	**Units:**	µg/L
Lab Code:	E2001238-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	12/22/20	12/29/20 18:30	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 0910
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	18CPTMW10DW_121620	**Units:**	µg/L
Lab Code:	E2001238-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.924**		0.500	0.250	0.125	5	12/22/20	12/29/20 18:38	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 1000
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	18WW06_121620	**Units:**	µg/L
Lab Code:	E2001238-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	12/22/20	12/29/20 18:46	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 1045
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	18WW02_121620	**Units:**	µg/L
Lab Code:	E2001238-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/22/20	12/29/20 18:53	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 1150
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	18WW10_121620	**Units:**	µg/L
Lab Code:	E2001238-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.500	0.250	0.125	5	12/22/20	12/29/20 19:09	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 1235
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	MW17_121620	**Units:**	µg/L
Lab Code:	E2001238-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.200	0.100	0.0500	2	12/22/20	12/29/20 19:17	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000704-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/22/20	12/29/20 17:42	371929	708667	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20120908
Sample Matrix: Ground Water

Service Request: E2001238
Date Analyzed: 12/29/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 371929

	Lab Control Sample EQ2000704-02			Duplicate Lab Control Sample EQ2000704-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.107	0.100	107	0.0963	0.100	96	84 - 119	10	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000704-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.107**		0.100	0.0500	0.0250	1	12/22/20	12/29/20 17:50	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000704-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0963**	J	0.100	0.0500	0.0250	1	12/22/20	12/29/20 17:58	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
		Date Analyzed:	12/30/20 - 12/30/20

Matrix Spike Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Sample Name:	18CPTMW10DW_121620	**Units:**	µg/L
Lab Code:	E2001238-003	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		18CPTMW10DW_121620MS				18CPTMW10DW_121620DMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2000704-04				EQ2000704-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.924	1.04	0.100	116	1.03	0.100	110	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 0910
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	18CPTMW10DW_121620	**Units:**	µg/L
Lab Code:	EQ2000704-04	**Basis:**	NA
Run Type:	Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1.04**		0.200	0.100	0.0500	2	12/22/20	12/30/20 12:35	371929	708720	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001238
Project:	HS20120908	**Date Collected:**	12/16/20 0910
Sample Matrix:	Ground Water	**Date Received:**	12/18/20
Sample Name:	18CPTMW10DW_121620	**Units:**	µg/L
Lab Code:	EQ2000704-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**1.03**		0.200	0.100	0.0500	2	12/22/20	12/29/20 18:14	371929	708667	

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January 05, 2021

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20121018**

Laboratory Results for: **LHAAP 18 24**

Dear Marcia Olive,

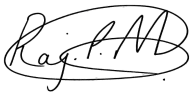
ALS Environmental received 10 sample(s) on Dec 19, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,



Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Work Order: HS20121018

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20121018-01	MW-8_12172020	Groundwater		17-Dec-2020 08:10	19-Dec-2020 11:12	☐
HS20121018-02	MW-18_12172020	Groundwater		17-Dec-2020 09:00	19-Dec-2020 11:12	☐
HS20121018-03	MW-18_12172020-a	Groundwater		17-Dec-2020 09:00	19-Dec-2020 11:12	☐
HS20121018-04	C08_12172020	Groundwater		17-Dec-2020 09:50	19-Dec-2020 11:12	☐
HS20121018-05	125_12172020	Groundwater		17-Dec-2020 10:05	19-Dec-2020 11:12	☐
HS20121018-06	126_12172020	Groundwater		17-Dec-2020 10:55	19-Dec-2020 11:12	☐
HS20121018-07	C09_12172020	Groundwater		17-Dec-2020 11:40	19-Dec-2020 11:12	☐
HS20121018-08	C09_12172020-a	Groundwater		17-Dec-2020 11:40	19-Dec-2020 11:12	☐
HS20121018-09	18CPTMW16_121720	Groundwater		17-Dec-2020 12:35	19-Dec-2020 11:12	☐
HS20121018-10	Trip Blank	Water	CG-102720-218	17-Dec-2020 00:00	19-Dec-2020 11:12	☐

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: LHAAP 18 24
Work Order: HS20121018

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 160949

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R375590

Sample ID: CCV

• Hexachlorobutadiene exceeded %D limits for CCV. Samples are ND for the compound

Sample ID: VLCSW-201229

• 1,2,3-Trichlorobenzene exceeded QC limits for LCS. Samples are ND for the compound.

Sample ID: HS20120908-03MSD

• MSD was performed on unrelated sample

Metals by Method SW7470

Batch ID: 161269

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 161250

Sample ID: HS20120908-03MS

• MS/MSD and DUPs are for an unrelated sample

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW-8_12172020
Collection Date: 17-Dec-2020 08:10

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:39
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 14:39
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 14:39
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 14:39
1,2-Dichloroethane	**1.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 14:39
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:39
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:39
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 14:39
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 14:39
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:39
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 14:39
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 14:39
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:39
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 14:39
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW-8_12172020
Collection Date: 17-Dec-2020 08:10

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
cis-1,2-Dichloroethene	**15**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 14:39
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 14:39
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 14:39
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 14:39
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 14:39
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Trichloroethene	**180**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 14:39
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 14:39
Surr: 1,2-Dichloroethane-d4	*84.6*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 14:39*
Surr: 4-Bromofluorobenzene	*95.0*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 14:39*
Surr: Dibromofluoromethane	*87.5*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 14:39*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 14:39*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.37**		**0.010**	**0.010**	**0.010**	**ug/L**	1	30-Dec-2020 13:12
Surr: 2-Fluorobiphenyl	*71.8*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 13:12*
Surr: 4-Terphenyl-d14	*83.7*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 13:12*
Surr: Nitrobenzene-d5	*68.7*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 13:12*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW-18_12172020
Collection Date: 17-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:13
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:13
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:13
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:13
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:13
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:13
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 19:13
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 19:13
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:13
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 19:13
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 19:13
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:13
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 19:13
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW-18_12172020
Collection Date: 17-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 19:13
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 19:13
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 19:13
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:13
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Trichloroethene	**7.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 19:13
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:13
Surr: 1,2-Dichloroethane-d4	*85.6*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 19:13*
Surr: 4-Bromofluorobenzene	*94.5*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 19:13*
Surr: Dibromofluoromethane	*87.9*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 19:13*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 19:13*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW-18_12172020-a
Collection Date: 17-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:34
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:34
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:34
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:34
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:34
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:34
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 19:34
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 19:34
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:34
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 19:34
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 19:34
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:34
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 19:34
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: MW-18_12172020-a
Collection Date: 17-Dec-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 19:34
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 19:34
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 19:34
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:34
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Trichloroethene	**6.9**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 19:34
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:34
Surr: 1,2-Dichloroethane-d4	*85.0*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 19:34*
Surr: 4-Bromofluorobenzene	*93.6*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 19:34*
Surr: Dibromofluoromethane	*88.3*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 19:34*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 19:34*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C08_12172020
Collection Date: 17-Dec-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:55
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:55
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:55
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 19:55
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:55
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:55
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 19:55
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 19:55
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:55
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 19:55
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 19:55
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:55
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 19:55
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C08_12172020
Collection Date: 17-Dec-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 19:55
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 19:55
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 19:55
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 19:55
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Trichloroethene	**1.5**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 19:55
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 19:55
Surr: 1,2-Dichloroethane-d4	*83.7*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 19:55*
Surr: 4-Bromofluorobenzene	*92.0*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 19:55*
Surr: Dibromofluoromethane	*88.6*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 19:55*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 19:55*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.053**		**0.010**	**0.010**	**0.010**	**ug/L**	1	30-Dec-2020 13:30
Surr: 2-Fluorobiphenyl	*77.6*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 13:30*
Surr: 4-Terphenyl-d14	*83.7*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 13:30*
Surr: Nitrobenzene-d5	*70.0*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 13:30*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C08_12172020
Collection Date: 17-Dec-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2021		Analyst: JHD
Aluminum	**0.0891**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	04-Jan-2021 18:00
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 18:00
Arsenic	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 18:00
Barium	**5.11**		**0.0190**	**0.0250**	**0.0500**	**mg/L**	10	05-Jan-2021 11:45
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:00
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:00
Calcium	**260**		**0.340**	**0.500**	**5.00**	**mg/L**	10	05-Jan-2021 11:45
Chromium	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 18:00
Cobalt	**0.00356**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	04-Jan-2021 18:00
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	04-Jan-2021 18:00
Iron	**0.464**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:00
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	04-Jan-2021 18:00
Magnesium	**149**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:00
Manganese	**0.979**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:00
Nickel	**0.00295**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:00
Potassium	**1.82**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:00
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	04-Jan-2021 18:00
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	04-Jan-2021 18:00
Sodium	**717**		**0.140**	**0.500**	**2.00**	**mg/L**	10	05-Jan-2021 11:45
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:00
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	04-Jan-2021 18:00
Zinc	**0.00710**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:00
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 04-Jan-2021		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	04-Jan-2021 16:07
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 125_12172020
Collection Date: 17-Dec-2020 10:05

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:16
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:16
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:16
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:16
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:16
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:16
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 20:16
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 20:16
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:16
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 20:16
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 20:16
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:16
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 20:16
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 125_12172020
Collection Date: 17-Dec-2020 10:05

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 20:16
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 20:16
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 20:16
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:16
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Trichloroethene	**1.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	29-Dec-2020 20:16
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:16
Surr: 1,2-Dichloroethane-d4	*86.6*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 20:16*
Surr: 4-Bromofluorobenzene	*94.5*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 20:16*
Surr: Dibromofluoromethane	*88.9*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 20:16*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 20:16*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 125_12172020
Collection Date: 17-Dec-2020 10:05

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2021		Analyst: JHD
Aluminum	**0.670**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	04-Jan-2021 18:02
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 18:02
Arsenic	**0.000600**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:02
Barium	**0.0893**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:02
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:02
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:02
Calcium	**1.61**		**0.0340**	**0.0500**	**0.500**	**mg/L**	1	04-Jan-2021 18:02
Chromium	**0.00232**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:02
Cobalt	**0.000545**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	04-Jan-2021 18:02
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	04-Jan-2021 18:02
Iron	**0.660**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:02
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	04-Jan-2021 18:02
Magnesium	**1.21**		**0.0100**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:02
Manganese	**0.0125**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:02
Nickel	**0.00230**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:02
Potassium	**0.607**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:02
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	04-Jan-2021 18:02
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	04-Jan-2021 18:02
Sodium	**33.2**		**0.0140**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:02
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:02
Vanadium	**0.00154**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:02
Zinc	**0.00473**	J	**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:02
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 04-Jan-2021		Analyst: JC
Mercury	**0.0000330**	J	**0.0000300**	**0.000100**	**0.000200**	**mg/L**	1	04-Jan-2021 16:09
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 126_12172020
Collection Date: 17-Dec-2020 10:55

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:37
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:37
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:37
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:37
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:37
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:37
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 20:37
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 20:37
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:37
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 20:37
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 20:37
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:37
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 20:37
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 126_12172020
Collection Date: 17-Dec-2020 10:55

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 20:37
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 20:37
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 20:37
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:37
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:37
Surr: 1,2-Dichloroethane-d4	*85.2*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 20:37*
Surr: 4-Bromofluorobenzene	*94.8*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 20:37*
Surr: Dibromofluoromethane	*87.2*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 20:37*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 20:37*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.53**		**0.050**	**0.050**	**0.050**	**ug/L**	5	30-Dec-2020 15:00
Surr: 2-Fluorobiphenyl	*63.0*			**0**	*40-140*	*%REC*	*5*	*30-Dec-2020 15:00*
Surr: 4-Terphenyl-d14	*80.3*			**0**	*40-140*	*%REC*	*5*	*30-Dec-2020 15:00*
Surr: Nitrobenzene-d5	*68.4*			**0**	*40-140*	*%REC*	*5*	*30-Dec-2020 15:00*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 126_12172020
Collection Date: 17-Dec-2020 10:55

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2021		Analyst: JHD
Aluminum	**0.125**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	04-Jan-2021 18:06
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 18:06
Arsenic	**0.00942**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
Barium	**9.17**		**0.190**	**0.250**	**0.500**	**mg/L**	100	05-Jan-2021 11:47
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:06
Cadmium	**0.000560**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	04-Jan-2021 18:06
Calcium	**311**		**3.40**	**5.00**	**50.0**	**mg/L**	100	05-Jan-2021 11:47
Chromium	**0.000517**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
Cobalt	**0.0193**		**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
Copper	**0.00138**	J	**0.00100**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
Iron	**9.48**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:06
Lead	**0.000663**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
Magnesium	**246**		**1.00**	**5.00**	**20.0**	**mg/L**	100	05-Jan-2021 11:47
Manganese	**0.272**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
Nickel	**0.0135**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
Potassium	**3.68**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:06
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	04-Jan-2021 18:06
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	04-Jan-2021 18:06
Sodium	**838**		**1.40**	**5.00**	**20.0**	**mg/L**	100	05-Jan-2021 11:47
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:06
Vanadium	**0.00245**	J	**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
Zinc	**0.0289**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:06
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 04-Jan-2021		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	04-Jan-2021 16:10
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C09_12172020
Collection Date: 17-Dec-2020 11:40

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:58
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:58
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:58
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 20:58
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:58
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:58
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 20:58
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 20:58
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:58
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 20:58
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 20:58
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:58
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 20:58
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C09_12172020
Collection Date: 17-Dec-2020 11:40

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 20:58
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 20:58
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 20:58
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 20:58
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 20:58
Surr: 1,2-Dichloroethane-d4	*87.0*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 20:58*
Surr: 4-Bromofluorobenzene	*93.3*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 20:58*
Surr: Dibromofluoromethane	*89.5*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 20:58*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 20:58*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C09_12172020
Collection Date: 17-Dec-2020 11:40

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2021		Analyst: JHD
Aluminum	**0.110**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	04-Jan-2021 18:08
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 18:08
Arsenic	**0.000526**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:08
Barium	**1.37**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:08
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:08
Cadmium	**0.000227**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	04-Jan-2021 18:08
Calcium	**414**		**3.40**	**5.00**	**50.0**	**mg/L**	100	05-Jan-2021 11:49
Chromium	**0.00595**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:08
Cobalt	**0.00192**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	04-Jan-2021 18:08
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	04-Jan-2021 18:08
Iron	**0.217**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:08
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	04-Jan-2021 18:08
Magnesium	**216**		**1.00**	**5.00**	**20.0**	**mg/L**	100	05-Jan-2021 11:49
Manganese	**0.538**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:08
Nickel	**0.0756**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:08
Potassium	**1.49**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:08
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	04-Jan-2021 18:08
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	04-Jan-2021 18:08
Sodium	**592**		**1.40**	**5.00**	**20.0**	**mg/L**	100	05-Jan-2021 11:49
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:08
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	04-Jan-2021 18:08
Zinc	**0.00969**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:08
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 04-Jan-2021		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	04-Jan-2021 16:12
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C09_12172020-a
Collection Date: 17-Dec-2020 11:40

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 21:19
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 21:19
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 21:19
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 21:19
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 21:19
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 21:19
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 21:19
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 21:19
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 21:19
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 21:19
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 21:19
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 21:19
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 21:19
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C09_12172020-a
Collection Date: 17-Dec-2020 11:40

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 21:19
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 21:19
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 21:19
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 21:19
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 21:19
Surr: 1,2-Dichloroethane-d4	*86.6*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 21:19*
Surr: 4-Bromofluorobenzene	*95.9*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 21:19*
Surr: Dibromofluoromethane	*87.5*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 21:19*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 21:19*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: C09_12172020-a
Collection Date: 17-Dec-2020 11:40

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 02-Jan-2021		Analyst: JHD
Aluminum	**0.114**		**0.00180**	**0.00500**	**0.0100**	**mg/L**	1	04-Jan-2021 18:10
Antimony	0.00100	U	0.000400	0.00100	0.00500	mg/L	1	04-Jan-2021 18:10
Arsenic	**0.000553**	J	**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:10
Barium	**1.39**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:10
Beryllium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:10
Cadmium	**0.000240**	J	**0.000200**	**0.000500**	**0.00200**	**mg/L**	1	04-Jan-2021 18:10
Calcium	**427**		**3.40**	**5.00**	**50.0**	**mg/L**	100	05-Jan-2021 11:57
Chromium	**0.00665**		**0.000400**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:10
Cobalt	**0.00186**	J	**0.000100**	**0.000500**	**0.00500**	**mg/L**	1	04-Jan-2021 18:10
Copper	0.00250	U	0.00100	0.00250	0.00500	mg/L	1	04-Jan-2021 18:10
Iron	**0.224**		**0.0120**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:10
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	04-Jan-2021 18:10
Magnesium	**222**		**1.00**	**5.00**	**20.0**	**mg/L**	100	05-Jan-2021 11:57
Manganese	**0.537**		**0.000700**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:10
Nickel	**0.0742**		**0.000600**	**0.00100**	**0.00500**	**mg/L**	1	04-Jan-2021 18:10
Potassium	**1.48**		**0.0180**	**0.0500**	**0.200**	**mg/L**	1	04-Jan-2021 18:10
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	04-Jan-2021 18:10
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	04-Jan-2021 18:10
Sodium	**619**		**1.40**	**5.00**	**20.0**	**mg/L**	100	05-Jan-2021 11:57
Thallium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	04-Jan-2021 18:10
Vanadium	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	04-Jan-2021 18:10
Zinc	**0.00895**		**0.00200**	**0.00250**	**0.00500**	**mg/L**	1	04-Jan-2021 18:10
MERCURY BY SW7470A		**Method:SW7470**				Prep:SW7470 / 04-Jan-2021		Analyst: JC
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	04-Jan-2021 16:14
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: 18CPTMW16_121720
Collection Date: 17-Dec-2020 12:35

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 22-Dec-2020		Analyst: ACN
1,4-Dioxane	**0.13**		**0.010**	**0.010**	**0.010**	**ug/L**	1	30-Dec-2020 14:06
Surr: 2-Fluorobiphenyl	*73.3*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 14:06*
Surr: 4-Terphenyl-d14	*81.2*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 14:06*
Surr: Nitrobenzene-d5	*62.4*			**0**	*40-140*	*%REC*	*1*	*30-Dec-2020 14:06*
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	31-Dec-2020 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 17-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-10
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,1,2,2-Tetrachloroethane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:28
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 17:28
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 17:28
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	29-Dec-2020 17:28
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,2-Dichloropropane	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:28
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:28
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 17:28
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	29-Dec-2020 17:28
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:28
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	29-Dec-2020 17:28
Acetone	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 17:28
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:28
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Bromoform	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Bromomethane	0.50	U	0.40	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Carbon disulfide	1.0	U	0.60	1.0	2.0	ug/L	1	29-Dec-2020 17:28
Carbon tetrachloride	0.50	U	0.50	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Chlorobenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Chloroethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
Sample ID: Trip Blank
Collection Date: 17-Dec-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20121018
Lab ID:HS20121018-10
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Dibromochloromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Ethylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	29-Dec-2020 17:28
Isopropylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	29-Dec-2020 17:28
Methylene chloride	1.0	U	0.40	1.0	2.0	ug/L	1	29-Dec-2020 17:28
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	29-Dec-2020 17:28
n-Propylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Naphthalene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
o-Xylene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Styrene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Tetrachloroethene	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	29-Dec-2020 17:28
Surr: 1,2-Dichloroethane-d4	*84.4*			**0**	*81-118*	*%REC*	*1*	*29-Dec-2020 17:28*
Surr: 4-Bromofluorobenzene	*94.7*			**0**	*85-114*	*%REC*	*1*	*29-Dec-2020 17:28*
Surr: Dibromofluoromethane	*87.5*			**0**	*80-119*	*%REC*	*1*	*29-Dec-2020 17:28*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*29-Dec-2020 17:28*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

Batch ID: 160949 **Start Date:** 22 Dec 2020 09:49 **End Date:** 22 Dec 2020 14:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20121018-01	1	1000 (mL)	1 (mL)	0.001
HS20121018-04	1	1000 (mL)	1 (mL)	0.001
HS20121018-06	1	1000 (mL)	1 (mL)	0.001
HS20121018-09	1	1000 (mL)	1 (mL)	0.001

Batch ID: 161250 **Start Date:** 02 Jan 2021 09:30 **End Date:** 02 Jan 2021 13:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20121018-04		10 (mL)	10 (mL)	1
HS20121018-05		10 (mL)	10 (mL)	1
HS20121018-06		10 (mL)	10 (mL)	1
HS20121018-07		10 (mL)	10 (mL)	1
HS20121018-08		10 (mL)	10 (mL)	1

Batch ID: 161269 **Start Date:** 04 Jan 2021 09:00 **End Date:** 04 Jan 2021 11:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20121018-04		10 (mL)	10 (mL)	1
HS20121018-05		10 (mL)	10 (mL)	1
HS20121018-06		10 (mL)	10 (mL)	1
HS20121018-07		10 (mL)	10 (mL)	1
HS20121018-08		10 (mL)	10 (mL)	1

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 160949 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Groundwater	
HS20121018-01	MW-8_12172020	17 Dec 2020 08:10		22 Dec 2020 09:49	30 Dec 2020 13:12	1
HS20121018-04	C08_12172020	17 Dec 2020 09:50		22 Dec 2020 09:49	30 Dec 2020 13:30	1
HS20121018-06	126_12172020	17 Dec 2020 10:55		22 Dec 2020 09:49	30 Dec 2020 15:00	5
HS20121018-09	18CPTMW16_121720	17 Dec 2020 12:35		22 Dec 2020 09:49	30 Dec 2020 14:06	1
Batch ID: 161250 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Groundwater	
HS20121018-04	C08_12172020	17 Dec 2020 09:50		02 Jan 2021 13:30	05 Jan 2021 11:45	10
HS20121018-04	C08_12172020	17 Dec 2020 09:50		02 Jan 2021 13:30	04 Jan 2021 18:00	1
HS20121018-05	125_12172020	17 Dec 2020 10:05		02 Jan 2021 13:30	04 Jan 2021 18:02	1
HS20121018-06	126_12172020	17 Dec 2020 10:55		02 Jan 2021 13:30	05 Jan 2021 11:47	100
HS20121018-06	126_12172020	17 Dec 2020 10:55		02 Jan 2021 13:30	04 Jan 2021 18:06	1
HS20121018-07	C09_12172020	17 Dec 2020 11:40		02 Jan 2021 13:30	05 Jan 2021 11:49	100
HS20121018-07	C09_12172020	17 Dec 2020 11:40		02 Jan 2021 13:30	04 Jan 2021 18:08	1
HS20121018-08	C09_12172020-a	17 Dec 2020 11:40		02 Jan 2021 13:30	05 Jan 2021 11:57	100
HS20121018-08	C09_12172020-a	17 Dec 2020 11:40		02 Jan 2021 13:30	04 Jan 2021 18:10	1
Batch ID: 161269 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Groundwater	
HS20121018-04	C08_12172020	17 Dec 2020 09:50		04 Jan 2021 09:17	04 Jan 2021 16:07	1
HS20121018-05	125_12172020	17 Dec 2020 10:05		04 Jan 2021 09:17	04 Jan 2021 16:09	1
HS20121018-06	126_12172020	17 Dec 2020 10:55		04 Jan 2021 09:17	04 Jan 2021 16:10	1
HS20121018-07	C09_12172020	17 Dec 2020 11:40		04 Jan 2021 09:17	04 Jan 2021 16:12	1
HS20121018-08	C09_12172020-a	17 Dec 2020 11:40		04 Jan 2021 09:17	04 Jan 2021 16:14	1
Batch ID: R375590 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20121018-10	Trip Blank	17 Dec 2020 00:00			29 Dec 2020 17:28	1
Batch ID: R375590 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20121018-01	MW-8_12172020	17 Dec 2020 08:10			29 Dec 2020 14:39	1
HS20121018-02	MW-18_12172020	17 Dec 2020 09:00			29 Dec 2020 19:13	1
HS20121018-03	MW-18_12172020-a	17 Dec 2020 09:00			29 Dec 2020 19:34	1
HS20121018-04	C08_12172020	17 Dec 2020 09:50			29 Dec 2020 19:55	1
HS20121018-05	125_12172020	17 Dec 2020 10:05			29 Dec 2020 20:16	1
HS20121018-06	126_12172020	17 Dec 2020 10:55			29 Dec 2020 20:37	1
HS20121018-07	C09_12172020	17 Dec 2020 11:40			29 Dec 2020 20:58	1
HS20121018-08	C09_12172020-a	17 Dec 2020 11:40			29 Dec 2020 21:19	1

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R375718 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Groundwater	
HS20121018-01	MW-8_12172020	17 Dec 2020 08:10			31 Dec 2020 12:46	1
HS20121018-02	MW-18_12172020	17 Dec 2020 09:00			31 Dec 2020 12:46	1
HS20121018-03	MW-18_12172020-a	17 Dec 2020 09:00			31 Dec 2020 12:46	1
HS20121018-04	C08_12172020	17 Dec 2020 09:50			31 Dec 2020 12:46	1
HS20121018-05	125_12172020	17 Dec 2020 10:05			31 Dec 2020 12:46	1
HS20121018-06	126_12172020	17 Dec 2020 10:55			31 Dec 2020 12:46	1
HS20121018-07	C09_12172020	17 Dec 2020 11:40			31 Dec 2020 12:46	1
HS20121018-08	C09_12172020-a	17 Dec 2020 11:40			31 Dec 2020 12:46	1
HS20121018-09	18CPTMW16_121720	17 Dec 2020 12:35			31 Dec 2020 12:46	1

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-161250** Units: **mg/L** Analysis Date: **04-Jan-2021 17:37**
Client ID: Run ID: **ICPMS05_375807** SeqNo: **5909493** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.002662	0.0100								J
Antimony	0.00100	0.00500								U
Arsenic	0.00100	0.00500								U
Barium	0.00250	0.00500								U
Beryllium	0.000500	0.00200								U
Cadmium	0.000500	0.00200								U
Calcium	0.0500	0.500								U
Chromium	0.00100	0.00500								U
Cobalt	0.000500	0.00500								U
Copper	0.00250	0.00500								U
Iron	0.0500	0.200								U
Lead	0.00100	0.00500								U
Magnesium	0.0500	0.200								U
Manganese	0.00250	0.00500								U
Nickel	0.00100	0.00500								U
Potassium	0.0500	0.200								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U
Sodium	0.06023	0.200								J
Thallium	0.000500	0.00200								U
Vanadium	0.00100	0.00500								U
Zinc	0.00250	0.00500								U

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

LCS Sample ID: **LCS-161250** Units: **mg/L** Analysis Date: **04-Jan-2021 17:39**
Client ID: Run ID: **ICPMS05_375807** SeqNo: **5909494** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1061	0.0100	0.1	0	106	84 - 117				
Antimony	0.04865	0.00500	0.05	0	97.3	85 - 117				
Arsenic	0.05157	0.00500	0.05	0	103	84 - 116				
Barium	0.04726	0.00500	0.05	0	94.5	86 - 114				
Beryllium	0.04598	0.00200	0.05	0	92.0	83 - 121				
Cadmium	0.0495	0.00200	0.05	0	99.0	87 - 115				
Calcium	4.965	0.500	5	0	99.3	87 - 118				
Chromium	0.04896	0.00500	0.05	0	97.9	85 - 116				
Cobalt	0.04936	0.00500	0.05	0	98.7	86 - 115				
Copper	0.05023	0.00500	0.05	0	100	85 - 118				
Iron	4.976	0.200	5	0	99.5	87 - 118				
Lead	0.04656	0.00500	0.05	0	93.1	88 - 115				
Magnesium	5.202	0.200	5	0	104	83 - 118				
Manganese	0.04968	0.00500	0.05	0	99.4	87 - 115				
Nickel	0.04938	0.00500	0.05	0	98.8	85 - 117				
Potassium	5.288	0.200	5	0	106	87 - 115				
Selenium	0.05533	0.00500	0.05	0	111	80 - 120				
Silver	0.04383	0.00500	0.05	0	87.7	85 - 116				
Sodium	5.238	0.200	5	0	105	85 - 117				
Thallium	0.04295	0.00200	0.05	0	85.9	82 - 116				
Vanadium	0.04924	0.00500	0.05	0	98.5	86 - 115				
Zinc	0.05275	0.00500	0.05	0	106	83 - 119				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MS Sample ID: **HS20120908-03MS** Units: **mg/L** Analysis Date: **04-Jan-2021 17:46**
Client ID: Run ID: **ICPMS05_375807** SeqNo: **5909498** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4226	0.0100	0.1	0.3168	106	84 - 117				
Antimony	0.0472	0.00500	0.05	0.000319	93.8	85 - 117				
Arsenic	0.05074	0.00500	0.05	0.001997	97.5	84 - 116				
Barium	0.1596	0.00500	0.05	0.1115	96.1	86 - 114				
Beryllium	0.05408	0.00200	0.05	0.000036	108	83 - 121				
Cadmium	0.04665	0.00200	0.05	0.000038	93.2	87 - 115				
Calcium	14.64	0.500	5	9.644	100.0	87 - 118				
Chromium	0.05458	0.00500	0.05	0.006506	96.2	85 - 116				
Cobalt	0.04719	0.00500	0.05	0.000494	93.4	86 - 115				
Copper	0.04903	0.00500	0.05	0.002986	92.1	85 - 118				
Iron	8.085	0.200	5	3.277	96.2	87 - 118				
Lead	0.04703	0.00500	0.05	0.001627	90.8	88 - 115				
Magnesium	10.26	0.200	5	5.31	99.0	83 - 118				
Manganese	0.1147	0.00500	0.05	0.0679	93.6	87 - 115				
Nickel	0.0482	0.00500	0.05	0.001877	92.6	85 - 117				
Potassium	89.64	0.200	5	83.57	121	87 - 115				SO
Selenium	0.04928	0.00500	0.05	0.000149	98.3	80 - 120				
Sodium	191.3	0.200	5	184.9	127	85 - 117				SEO
Thallium	0.04172	0.00200	0.05	-0.000048	83.5	82 - 116				
Vanadium	0.05026	0.00500	0.05	0.001331	97.9	86 - 115				
Zinc	0.05706	0.00500	0.05	0.01475	84.6	83 - 119				

MS Sample ID: **HS20120908-03MS** Units: **mg/L** Analysis Date: **05-Jan-2021 11:36**
Client ID: Run ID: **ICPMS05_375891** SeqNo: **5910255** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	0.04265	0.00500	0.05	0	85.3	85 - 116				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MSD Sample ID: **HS20120908-03MSD** Units: **mg/L** Analysis Date: **04-Jan-2021 17:48**
Client ID: Run ID: **ICPMS05_375807** SeqNo: **5909499** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4999	0.0100	0.1	0.3168	183	84 - 117	0.4226	16.8	20	S
Antimony	0.04772	0.00500	0.05	0.000319	94.8	85 - 117	0.0472	1.11	20	
Arsenic	0.05273	0.00500	0.05	0.001997	101	84 - 116	0.05074	3.83	20	
Barium	0.1657	0.00500	0.05	0.1115	108	86 - 114	0.1596	3.75	20	
Beryllium	0.057	0.00200	0.05	0.000036	114	83 - 121	0.05408	5.26	20	
Cadmium	0.04856	0.00200	0.05	0.000038	97.0	87 - 115	0.04665	4	20	
Calcium	14.91	0.500	5	9.644	105	87 - 118	14.64	1.8	20	
Chromium	0.05675	0.00500	0.05	0.006506	100	85 - 116	0.05458	3.89	20	
Cobalt	0.04909	0.00500	0.05	0.000494	97.2	86 - 115	0.04719	3.94	20	
Copper	0.05024	0.00500	0.05	0.002986	94.5	85 - 118	0.04903	2.43	20	
Iron	8.26	0.200	5	3.277	99.7	87 - 118	8.085	2.13	20	
Lead	0.04863	0.00500	0.05	0.001627	94.0	88 - 115	0.04703	3.34	20	
Magnesium	10.55	0.200	5	5.31	105	83 - 118	10.26	2.8	20	
Manganese	0.1185	0.00500	0.05	0.0679	101	87 - 115	0.1147	3.27	20	
Nickel	0.0497	0.00500	0.05	0.001877	95.7	85 - 117	0.0482	3.07	20	
Potassium	91.96	0.200	5	83.57	168	87 - 115	89.64	2.55	20	SO
Selenium	0.05	0.00500	0.05	0.000149	99.7	80 - 120	0.04928	1.45	20	
Silver	0.04235	0.00500	0.05	-0.000302	85.3	85 - 116	0.04085	3.61	20	
Sodium	197.9	0.200	5	184.9	259	85 - 117	191.3	3.38	20	SEO
Thallium	0.04353	0.00200	0.05	-0.000048	87.2	82 - 116	0.04172	4.24	20	
Vanadium	0.05184	0.00500	0.05	0.001331	101	86 - 115	0.05026	3.08	20	
Zinc	0.05668	0.00500	0.05	0.01475	83.9	83 - 119	0.05706	0.661	20	

PDS Sample ID: **HS20120908-03PDS** Units: **mg/L** Analysis Date: **05-Jan-2021 11:43**
Client ID: Run ID: **ICPMS05_375891** SeqNo: **5910259** PrepDate: **02-Jan-2021** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.27	0.100	1	0.2038	107	80 - 120				
Sodium	278.3	2.00	100	170.6	108	80 - 120				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20120908-03PDS** Units: **mg/L** Analysis Date: **04-Jan-2021 17:50**
Client ID: Run ID: **ICPMS05_375807** SeqNo: **5909500** PrepDate: **02-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.08853	0.00500	0.1	0.000319	88.2	80 - 120				
Arsenic	0.1039	0.00500	0.1	0.001997	102	80 - 120				
Barium	0.2051	0.00500	0.1	0.1115	93.6	80 - 120				
Beryllium	0.116	0.00200	0.1	0.000036	116	80 - 120				
Cadmium	0.09371	0.00200	0.1	0.000038	93.7	80 - 120				
Calcium	19.42	0.500	10	9.644	97.7	80 - 120				
Chromium	0.1034	0.00500	0.1	0.006506	96.9	80 - 120				
Cobalt	0.09478	0.00500	0.1	0.000494	94.3	80 - 120				
Copper	0.0967	0.00500	0.1	0.002986	93.7	80 - 120				
Iron	12.72	0.200	10	3.277	94.4	80 - 120				
Lead	0.09315	0.00500	0.1	0.001627	91.5	80 - 120				
Magnesium	15.37	0.200	10	5.31	101	80 - 120				
Manganese	0.1621	0.00500	0.1	0.0679	94.2	80 - 120				
Nickel	0.09529	0.00500	0.1	0.001877	93.4	80 - 120				
Potassium	94.81	0.200	10	83.57	112	80 - 120				O
Selenium	0.1017	0.00500	0.1	0.000149	102	80 - 120				
Silver	0.08446	0.00500	0.1	-0.000302	84.8	80 - 120				
Thallium	0.09706	0.00200	0.1	-0.000048	97.1	80 - 120				
Vanadium	0.1008	0.00500	0.1	0.001331	99.5	80 - 120				
Zinc	0.1057	0.00500	0.1	0.01475	91.0	80 - 120				

SD Sample ID: **HS20120908-03SD** Units: **mg/L** Analysis Date: **05-Jan-2021 11:41**
Client ID: Run ID: **ICPMS05_375891** SeqNo: **5910258** PrepDate: **02-Jan-2021** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.3837	0.500					0.2038	0	10	J
Sodium	188.8	10.0					170.6	10.7	10	R

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: 161250 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20120908-03SD** Units: **mg/L** Analysis Date: **04-Jan-2021 17:44**
Client ID: Run ID: **ICPMS05_375807** SeqNo: **5909497** PrepDate: **02-Jan-2021** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	0.00500	0.0250					0.000319	0	10	U
Arsenic	0.002356	0.0250					0.001997	0	10	J
Barium	0.1123	0.0250					0.1115	0.699	10	
Beryllium	0.00250	0.0100					0.000036	0	10	U
Cadmium	0.00250	0.0100					0.000038	0	10	U
Calcium	9.959	2.50					9.644	3.28	10	
Chromium	0.006591	0.0250					0.006506	0	10	J
Cobalt	0.000504	0.0250					0.000494	0	10	J
Copper	0.0125	0.0250					0.002986	0	10	U
Iron	3.472	1.00					3.277	5.95	10	
Lead	0.00500	0.0250					0.001627	0	10	U
Magnesium	5.135	1.00					5.31	3.29	10	
Nickel	0.003158	0.0250					0.001877	0	10	J
Potassium	85.52	1.00					83.57	2.33	10	
Selenium	0.0125	0.0250					0.000149	0	10	U
Silver	0.00250	0.0250					-0.000302	0	10	U
Thallium	0.00250	0.0100					-0.000048	0	10	U
Vanadium	0.003036	0.0250					0.001331	0	10	J
Zinc	0.01112	0.0250					0.01475	0	10	J

The following samples were analyzed in this batch: HS20121018-04 HS20121018-05 HS20121018-06 HS20121018-07 HS20121018-08

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: 161269 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-161269** Units: **mg/L** Analysis Date: **04-Jan-2021 15:48**
Client ID: Run ID: **HG03_375805** SeqNo: **5908740** PrepDate: **04-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000100	0.000200								U

LCS Sample ID: **LCS-161269** Units: **mg/L** Analysis Date: **04-Jan-2021 15:52**
Client ID: Run ID: **HG03_375805** SeqNo: **5908741** PrepDate: **04-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00485	0.000200	0.005	0	97.0	82 - 119				

MS Sample ID: **HS20120908-03MS** Units: **mg/L** Analysis Date: **04-Jan-2021 15:55**
Client ID: Run ID: **HG03_375805** SeqNo: **5908743** PrepDate: **04-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00475	0.000200	0.005	-0.000002000	95.0	82 - 119				

MSD Sample ID: **HS20120908-03MSD** Units: **mg/L** Analysis Date: **04-Jan-2021 15:57**
Client ID: Run ID: **HG03_375805** SeqNo: **5908744** PrepDate: **04-Jan-2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00501	0.000200	0.005	-0.000002000	100	82 - 119	0.004750	5.33	20	

The following samples were analyzed in this batch: HS20121018-04 HS20121018-05 HS20121018-06 HS20121018-07 HS20121018-08

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: 160949 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 12:49**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903679** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.0598*	*0*	*0.08*	*0*	*74.8*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07037*	*0*	*0.08*	*0*	*88.0*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.0866*	*0*	*0.08*	*0*	*108*	*40 - 140*				

LCS Sample ID: **LCS-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 13:07**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903680** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.07018	0.010	0.08	0	87.7	40 - 140				
Surr: 2-Fluorobiphenyl	*0.06536*	*0*	*0.08*	*0*	*81.7*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07812*	*0*	*0.08*	*0*	*97.6*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.06385*	*0*	*0.08*	*0*	*79.8*	*40 - 140*				

LCSD Sample ID: **LCSD-160949** Units: **ug/L** Analysis Date: **29-Dec-2020 13:24**
Client ID: Run ID: **SV-6_375533** SeqNo: **5903681** PrepDate: **22-Dec-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.06003	0.010	0.08	0	75.0	40 - 140	0.07018	15.6	20	
Surr: 2-Fluorobiphenyl	*0.059*	*0*	*0.08*	*0*	*73.8*	*40 - 140*	*0.06536*	*10.2*	*20*	
Surr: 4-Terphenyl-d14	*0.06912*	*0*	*0.08*	*0*	*86.4*	*40 - 140*	*0.07812*	*12.2*	*20*	
Surr: Nitrobenzene-d5	*0.05554*	*0*	*0.08*	*0*	*69.4*	*40 - 140*	*0.06385*	*13.9*	*20*	

The following samples were analyzed in this batch: HS20121018-01 HS20121018-04 HS20121018-06 HS20121018-09

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201229** Units: **ug/L** Analysis Date: **29-Dec-2020 12:54**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903411** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	0.50	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	0.50	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	0.50	1.0								U
Bromomethane	0.50	1.0								U

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-201229** Units: **ug/L** Analysis Date: **29-Dec-2020 12:54**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903411** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	0.50	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*42.24*	*1.0*	*50*	*0*	*84.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.31*	*1.0*	*50*	*0*	*96.6*	*85 - 114*				
Surr: Dibromofluoromethane	*43.76*	*1.0*	*50*	*0*	*87.5*	*80 - 119*				
Surr: Toluene-d8	*52.22*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201229** Units: **ug/L** Analysis Date: **29-Dec-2020 12:12**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903410** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.79	1.0	20	0	104	78 - 124				
1,1,1-Trichloroethane	20.72	1.0	20	0	104	74 - 131				
1,1,2,2-Tetrachloroethane	20.47	1.0	20	0	102	71 - 121				
1,1,2-Trichloroethane	20.91	1.0	20	0	105	80 - 119				
1,1-Dichloroethane	21.11	1.0	20	0	106	77 - 125				
1,1-Dichloroethene	19.47	1.0	20	0	97.4	71 - 131				
1,1-Dichloropropene	21.09	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	26.33	1.0	20	0	132	69 - 129				S
1,2,3-Trichloropropane	20.21	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	25.2	1.0	20	0	126	69 - 130				
1,2,4-Trimethylbenzene	21.46	1.0	20	0	107	76 - 124				
1,2-Dibromo-3-chloropropane	21.68	1.0	20	0	108	62 - 128				
1,2-Dibromoethane	21.28	1.0	20	0	106	77 - 121				
1,2-Dichlorobenzene	20.59	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	19.75	1.0	20	0	98.8	73 - 128				
1,2-Dichloropropane	21.39	1.0	20	0	107	78 - 122				
1,3,5-Trimethylbenzene	21.24	1.0	20	0	106	75 - 124				
1,3-Dichlorobenzene	20.82	1.0	20	0	104	80 - 119				
1,3-Dichloropropane	21.58	1.0	20	0	108	80 - 119				
1,4-Dichlorobenzene	21.04	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	21	1.0	20	0	105	60 - 139				
2-Butanone	46.78	2.0	40	0	117	56 - 143				
2-Chlorotoluene	21.78	1.0	20	0	109	79 - 122				
2-Hexanone	38.45	2.0	40	0	96.1	57 - 139				
4-Chlorotoluene	20.88	1.0	20	0	104	78 - 122				
4-Isopropyltoluene	21.76	1.0	20	0	109	77 - 127				
4-Methyl-2-pentanone	38.79	2.0	40	0	97.0	67 - 130				
Acetone	42.26	2.0	40	0	106	39 - 160				
Benzene	21.56	1.0	20	0	108	79 - 120				
Bromobenzene	20.29	1.0	20	0	101	80 - 120				
Bromochloromethane	20.96	1.0	20	0	105	78 - 123				
Bromodichloromethane	21.43	1.0	20	0	107	79 - 125				
Bromoform	21.83	1.0	20	0	109	66 - 130				
Bromomethane	24.87	1.0	20	0	124	53 - 141				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-201229** Units: **ug/L** Analysis Date: **29-Dec-2020 12:12**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903410** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	45.24	2.0	40	0	113	64 - 133				
Carbon tetrachloride	22.32	1.0	20	0	112	72 - 136				
Chlorobenzene	20.13	1.0	20	0	101	82 - 118				
Chloroethane	18.97	1.0	20	0	94.9	60 - 138				
Chloroform	20.95	1.0	20	0	105	79 - 124				
Chloromethane	18.55	1.0	20	0	92.8	50 - 139				
cis-1,2-Dichloroethene	21.14	1.0	20	0	106	78 - 123				
cis-1,3-Dichloropropene	21.59	1.0	20	0	108	75 - 124				
Dibromochloromethane	21.14	1.0	20	0	106	74 - 126				
Dibromomethane	21.29	1.0	20	0	106	79 - 123				
Dichlorodifluoromethane	25.04	1.0	20	0	125	32 - 152				
Ethylbenzene	21.96	1.0	20	0	110	79 - 121				
Hexachlorobutadiene	26.32	1.0	20	0	132	66 - 134				
Isopropylbenzene	21.35	1.0	20	0	107	72 - 131				
m,p-Xylene	41.26	2.0	40	0	103	80 - 121				
Methylene chloride	21.78	2.0	20	0	109	74 - 124				
Naphthalene	23.98	1.0	20	0	120	61 - 128				
n-Butylbenzene	22.63	1.0	20	0	113	75 - 128				
n-Propylbenzene	21.59	1.0	20	0	108	76 - 126				
o-Xylene	20.42	1.0	20	0	102	78 - 122				
sec-Butylbenzene	21.7	1.0	20	0	109	77 - 126				
Styrene	20.74	1.0	20	0	104	78 - 123				
tert-Butylbenzene	21.48	1.0	20	0	107	78 - 124				
Tetrachloroethene	22.48	1.0	20	0	112	74 - 129				
Toluene	20.91	1.0	20	0	105	80 - 121				
trans-1,2-Dichloroethene	21.25	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	21.26	1.0	20	0	106	73 - 127				
Trichloroethene	20.38	1.0	20	0	102	79 - 123				
Trichlorofluoromethane	19.22	1.0	20	0	96.1	65 - 141				
Vinyl chloride	21.02	1.0	20	0	105	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.72*	*1.0*	*50*	*0*	*97.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.47*	*1.0*	*50*	*0*	*105*	*85 - 114*				
Surr: Dibromofluoromethane	*50.1*	*1.0*	*50*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*49.92*	*1.0*	*50*	*0*	*99.8*	*89 - 112*				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120972-07MS** Units: **ug/L** Analysis Date: **29-Dec-2020 15:21**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903418** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.42	1.0	20	0	102	78 - 124				
1,1,1-Trichloroethane	19.25	1.0	20	0	96.3	74 - 131				
1,1,2,2-Tetrachloroethane	18.98	1.0	20	0	94.9	71 - 121				
1,1,2-Trichloroethane	19.36	1.0	20	0	96.8	80 - 119				
1,1-Dichloroethane	17.75	1.0	20	0	88.8	77 - 125				
1,1-Dichloroethene	17.59	1.0	20	0	88.0	71 - 131				
1,1-Dichloropropene	21.05	1.0	20	0	105	78 - 125				
1,2,3-Trichlorobenzene	17.8	1.0	20	0	89.0	69 - 129				
1,2,3-Trichloropropane	17.72	1.0	20	0	88.6	73 - 122				
1,2,4-Trichlorobenzene	19.28	1.0	20	0	96.4	69 - 130				
1,2,4-Trimethylbenzene	20.77	1.0	20	0	104	76 - 124				
1,2-Dibromo-3-chloropropane	17.08	1.0	20	0	85.4	62 - 128				
1,2-Dibromoethane	19.44	1.0	20	0	97.2	77 - 121				
1,2-Dichlorobenzene	18.87	1.0	20	0	94.4	80 - 119				
1,2-Dichloroethane	18.23	1.0	20	0	91.1	73 - 128				
1,2-Dichloropropane	19.49	1.0	20	0	97.5	78 - 122				
1,3,5-Trimethylbenzene	20.56	1.0	20	0	103	75 - 124				
1,3-Dichlorobenzene	19.72	1.0	20	0	98.6	80 - 119				
1,3-Dichloropropane	19.55	1.0	20	0	97.7	80 - 119				
1,4-Dichlorobenzene	19.59	1.0	20	0	97.9	79 - 118				
2,2-Dichloropropane	18.89	1.0	20	0	94.4	60 - 139				
2-Butanone	32.24	2.0	40	0	80.6	56 - 143				
2-Chlorotoluene	21.29	1.0	20	0	106	79 - 122				
2-Hexanone	32.94	2.0	40	0	82.3	57 - 139				
4-Chlorotoluene	20.67	1.0	20	0	103	78 - 122				
4-Isopropyltoluene	20.66	1.0	20	0	103	77 - 127				
4-Methyl-2-pentanone	33.52	2.0	40	0	83.8	67 - 130				
Acetone	23.27	2.0	40	0	58.2	39 - 160				
Benzene	19.83	1.0	20	0	99.2	79 - 120				
Bromobenzene	20.09	1.0	20	0	100	80 - 120				
Bromochloromethane	18.05	1.0	20	0	90.3	78 - 123				
Bromodichloromethane	19.62	1.0	20	0	98.1	79 - 125				
Bromoform	19.54	1.0	20	0	97.7	66 - 130				
Bromomethane	19.24	1.0	20	0	96.2	53 - 141				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120972-07MS** Units: **ug/L** Analysis Date: **29-Dec-2020 15:21**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903418** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	41.34	2.0	40	0	103	64 - 133				
Carbon tetrachloride	22.35	1.0	20	0	112	72 - 136				
Chlorobenzene	19.86	1.0	20	0	99.3	82 - 118				
Chloroethane	15.84	1.0	20	0	79.2	60 - 138				
Chloroform	18.18	1.0	20	0	90.9	79 - 124				
Chloromethane	13.62	1.0	20	0	68.1	50 - 139				
cis-1,2-Dichloroethene	19.05	1.0	20	0	95.2	78 - 123				
cis-1,3-Dichloropropene	19.3	1.0	20	0	96.5	75 - 124				
Dibromochloromethane	19.62	1.0	20	0	98.1	74 - 126				
Dibromomethane	19.17	1.0	20	0	95.8	79 - 123				
Dichlorodifluoromethane	15.55	1.0	20	0	77.7	32 - 152				
Ethylbenzene	20.6	1.0	20	0	103	79 - 121				
Hexachlorobutadiene	25.29	1.0	20	0	126	66 - 134				
Isopropylbenzene	20.61	1.0	20	0	103	72 - 131				
m,p-Xylene	40.47	2.0	40	0	101	80 - 121				
Methylene chloride	17.47	2.0	20	0	87.3	74 - 124				
Naphthalene	15.15	1.0	20	0	75.7	61 - 128				
n-Butylbenzene	21.83	1.0	20	0	109	75 - 128				
n-Propylbenzene	21.01	1.0	20	0	105	76 - 126				
o-Xylene	19.63	1.0	20	0	98.1	78 - 122				
sec-Butylbenzene	21.41	1.0	20	0	107	77 - 126				
Styrene	20.01	1.0	20	0	100	78 - 123				
tert-Butylbenzene	21.13	1.0	20	0	106	78 - 124				
Tetrachloroethene	21.97	1.0	20	0	110	74 - 129				
Toluene	20.77	1.0	20	0	104	80 - 121				
trans-1,2-Dichloroethene	18.52	1.0	20	0	92.6	75 - 124				
trans-1,3-Dichloropropene	18.49	1.0	20	0	92.5	73 - 127				
Trichloroethene	21.16	1.0	20	0	106	79 - 123				
Trichlorofluoromethane	17.99	1.0	20	0	89.9	65 - 141				
Vinyl chloride	18.18	1.0	20	0	90.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*43.76*	*1.0*	*50*	*0*	*87.5*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.42*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*45.34*	*1.0*	*50*	*0*	*90.7*	*80 - 119*				
Surr: Toluene-d8	*51.03*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120908-03MS** Units: **ug/L** Analysis Date: **29-Dec-2020 16:03**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903420** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.61	1.0	20	0	108	78 - 124				
1,1,1-Trichloroethane	20.04	1.0	20	0	100	74 - 131				
1,1,2,2-Tetrachloroethane	21.51	1.0	20	0	108	71 - 121				
1,1,2-Trichloroethane	19.85	1.0	20	0	99.3	80 - 119				
1,1-Dichloroethane	18.66	1.0	20	0	93.3	77 - 125				
1,1-Dichloroethene	18.81	1.0	20	0	94.1	71 - 131				
1,1-Dichloropropene	21.61	1.0	20	0	108	78 - 125				
1,2,3-Trichlorobenzene	22.76	1.0	20	0	114	69 - 129				
1,2,3-Trichloropropane	19.83	1.0	20	0	99.2	73 - 122				
1,2,4-Trichlorobenzene	23.03	1.0	20	0	115	69 - 130				
1,2,4-Trimethylbenzene	23.43	1.0	20	0	117	76 - 124				
1,2-Dibromo-3-chloropropane	21.68	1.0	20	0	108	62 - 128				
1,2-Dibromoethane	20.03	1.0	20	0	100	77 - 121				
1,2-Dichlorobenzene	21.49	1.0	20	0	107	80 - 119				
1,2-Dichloroethane	18.99	1.0	20	0	95.0	73 - 128				
1,2-Dichloropropane	20.59	1.0	20	0	103	78 - 122				
1,3,5-Trimethylbenzene	22.83	1.0	20	0	114	75 - 124				
1,3-Dichlorobenzene	22.46	1.0	20	0	112	80 - 119				
1,3-Dichloropropane	20.32	1.0	20	0	102	80 - 119				
1,4-Dichlorobenzene	22.68	1.0	20	0	113	79 - 118				
2,2-Dichloropropane	19.61	1.0	20	0	98.1	60 - 139				
2-Butanone	32.64	2.0	40	0	81.6	56 - 143				
2-Chlorotoluene	24.08	1.0	20	0	120	79 - 122				
2-Hexanone	33.32	2.0	40	0	83.3	57 - 139				
4-Chlorotoluene	23.06	1.0	20	0	115	78 - 122				
4-Isopropyltoluene	22.35	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	34.15	2.0	40	0	85.4	67 - 130				
Acetone	23.26	2.0	40	0	58.1	39 - 160				
Benzene	20.79	1.0	20	0	104	79 - 120				
Bromobenzene	22.25	1.0	20	0	111	80 - 120				
Bromochloromethane	18.74	1.0	20	0	93.7	78 - 123				
Bromodichloromethane	20.23	1.0	20	0	101	79 - 125				
Bromoform	20.19	1.0	20	0	101	66 - 130				
Bromomethane	18.69	1.0	20	0	93.4	53 - 141				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS20120908-03MS** Units: **ug/L** Analysis Date: **29-Dec-2020 16:03**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903420** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	43.17	2.0	40	0	108	64 - 133				
Carbon tetrachloride	24.25	1.0	20	0	121	72 - 136				
Chlorobenzene	20.62	1.0	20	0	103	82 - 118				
Chloroethane	17.85	1.0	20	0	89.3	60 - 138				
Chloroform	19.02	1.0	20	0	95.1	79 - 124				
Chloromethane	15.16	1.0	20	0	75.8	50 - 139				
cis-1,2-Dichloroethene	19.69	1.0	20	0	98.4	78 - 123				
cis-1,3-Dichloropropene	19.93	1.0	20	0	99.7	75 - 124				
Dibromochloromethane	20.03	1.0	20	0	100	74 - 126				
Dibromomethane	19.64	1.0	20	0	98.2	79 - 123				
Dichlorodifluoromethane	17.3	1.0	20	0	86.5	32 - 152				
Ethylbenzene	22.11	1.0	20	0	111	79 - 121				
Hexachlorobutadiene	24.37	1.0	20	0	122	66 - 134				
Isopropylbenzene	22.36	1.0	20	0	112	72 - 131				
m,p-Xylene	43.27	2.0	40	0	108	80 - 121				
Methylene chloride	18.38	2.0	20	0	91.9	74 - 124				
Naphthalene	19.85	1.0	20	0	99.3	61 - 128				
n-Butylbenzene	23.03	1.0	20	0	115	75 - 128				
n-Propylbenzene	23.56	1.0	20	0	118	76 - 126				
o-Xylene	20.73	1.0	20	0	104	78 - 122				
sec-Butylbenzene	23.25	1.0	20	0	116	77 - 126				
Styrene	20.65	1.0	20	0	103	78 - 123				
tert-Butylbenzene	23.48	1.0	20	0	117	78 - 124				
Tetrachloroethene	23.26	1.0	20	0	116	74 - 129				
Toluene	21.37	1.0	20	0	107	80 - 121				
trans-1,2-Dichloroethene	19.8	1.0	20	0	99.0	75 - 124				
trans-1,3-Dichloropropene	19.76	1.0	20	0	98.8	73 - 127				
Trichloroethene	21.32	1.0	20	1.071	101	79 - 123				
Trichlorofluoromethane	18.81	1.0	20	0	94.1	65 - 141				
Vinyl chloride	19.19	1.0	20	0	95.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*42.5*	*1.0*	*50*	*0*	*85.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.25*	*1.0*	*50*	*0*	*98.5*	*85 - 114*				
Surr: Dibromofluoromethane	*44.88*	*1.0*	*50*	*0*	*89.8*	*80 - 119*				
Surr: Toluene-d8	*50.99*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120972-07MSD** Units: **ug/L** Analysis Date: **29-Dec-2020 15:42**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903419** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.08	1.0	20	0	100	78 - 124	20.42	1.68	20	
1,1,1-Trichloroethane	18.46	1.0	20	0	92.3	74 - 131	19.25	4.24	20	
1,1,2,2-Tetrachloroethane	20.98	1.0	20	0	105	71 - 121	18.98	10.1	20	
1,1,2-Trichloroethane	19.95	1.0	20	0	99.7	80 - 119	19.36	2.98	20	
1,1-Dichloroethane	17.39	1.0	20	0	86.9	77 - 125	17.75	2.07	20	
1,1-Dichloroethene	16.82	1.0	20	0	84.1	71 - 131	17.59	4.47	20	
1,1-Dichloropropene	20.46	1.0	20	0	102	78 - 125	21.05	2.84	20	
1,2,3-Trichlorobenzene	23.72	1.0	20	0	119	69 - 129	17.8	28.5	20	R
1,2,3-Trichloropropane	19.63	1.0	20	0	98.1	73 - 122	17.72	10.2	20	
1,2,4-Trichlorobenzene	22.98	1.0	20	0	115	69 - 130	19.28	17.5	20	
1,2,4-Trimethylbenzene	21.09	1.0	20	0	105	76 - 124	20.77	1.51	20	
1,2-Dibromo-3-chloropropane	21.69	1.0	20	0	108	62 - 128	17.08	23.8	20	R
1,2-Dibromoethane	19.83	1.0	20	0	99.1	77 - 121	19.44	1.96	20	
1,2-Dichlorobenzene	20.66	1.0	20	0	103	80 - 119	18.87	9.02	20	
1,2-Dichloroethane	18.42	1.0	20	0	92.1	73 - 128	18.23	1.06	20	
1,2-Dichloropropane	19.93	1.0	20	0	99.6	78 - 122	19.49	2.2	20	
1,3,5-Trimethylbenzene	21.01	1.0	20	0	105	75 - 124	20.56	2.18	20	
1,3-Dichlorobenzene	20.57	1.0	20	0	103	80 - 119	19.72	4.21	20	
1,3-Dichloropropane	19.9	1.0	20	0	99.5	80 - 119	19.55	1.81	20	
1,4-Dichlorobenzene	20.71	1.0	20	0	104	79 - 118	19.59	5.58	20	
2,2-Dichloropropane	17.83	1.0	20	0	89.2	60 - 139	18.89	5.76	20	
2-Butanone	32.11	2.0	40	0	80.3	56 - 143	32.24	0.401	20	
2-Chlorotoluene	21.95	1.0	20	0	110	79 - 122	21.29	3.05	20	
2-Hexanone	35.36	2.0	40	0	88.4	57 - 139	32.94	7.09	20	
4-Chlorotoluene	21.01	1.0	20	0	105	78 - 122	20.67	1.61	20	
4-Isopropyltoluene	20.48	1.0	20	0	102	77 - 127	20.66	0.873	20	
4-Methyl-2-pentanone	35.71	2.0	40	0	89.3	67 - 130	33.52	6.31	20	
Acetone	24.02	2.0	40	0	60.1	39 - 160	23.27	3.19	20	
Benzene	19.67	1.0	20	0	98.4	79 - 120	19.83	0.824	20	
Bromobenzene	20.99	1.0	20	0	105	80 - 120	20.09	4.37	20	
Bromochloromethane	17.37	1.0	20	0	86.8	78 - 123	18.05	3.89	20	
Bromodichloromethane	19.67	1.0	20	0	98.3	79 - 125	19.62	0.243	20	
Bromoform	20.52	1.0	20	0	103	66 - 130	19.54	4.92	20	
Bromomethane	18.05	1.0	20	0	90.3	53 - 141	19.24	6.37	20	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120972-07MSD** Units: **ug/L** Analysis Date: **29-Dec-2020 15:42**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903419** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	39.61	2.0	40	0	99.0	64 - 133	41.34	4.27	20	
Carbon tetrachloride	21.65	1.0	20	0	108	72 - 136	22.35	3.19	20	
Chlorobenzene	19.6	1.0	20	0	98.0	82 - 118	19.86	1.32	20	
Chloroethane	16.53	1.0	20	0	82.7	60 - 138	15.84	4.26	20	
Chloroform	18.01	1.0	20	0	90.1	79 - 124	18.18	0.922	20	
Chloromethane	13.39	1.0	20	0	66.9	50 - 139	13.62	1.74	20	
cis-1,2-Dichloroethene	18.34	1.0	20	0	91.7	78 - 123	19.05	3.79	20	
cis-1,3-Dichloropropene	19.34	1.0	20	0	96.7	75 - 124	19.3	0.212	20	
Dibromochloromethane	19.93	1.0	20	0	99.6	74 - 126	19.62	1.53	20	
Dibromomethane	19.81	1.0	20	0	99.0	79 - 123	19.17	3.31	20	
Dichlorodifluoromethane	15.49	1.0	20	0	77.5	32 - 152	15.55	0.351	20	
Ethylbenzene	21.31	1.0	20	0	107	79 - 121	20.6	3.4	20	
Hexachlorobutadiene	25.82	1.0	20	0	129	66 - 134	25.29	2.07	20	
Isopropylbenzene	20.47	1.0	20	0	102	72 - 131	20.61	0.684	20	
m,p-Xylene	40.74	2.0	40	0	102	80 - 121	40.47	0.684	20	
Methylene chloride	17.65	2.0	20	0	88.2	74 - 124	17.47	1.01	20	
Naphthalene	20.85	1.0	20	0	104	61 - 128	15.15	31.7	20	R
n-Butylbenzene	21.31	1.0	20	0	107	75 - 128	21.83	2.38	20	
n-Propylbenzene	21.14	1.0	20	0	106	76 - 126	21.01	0.607	20	
o-Xylene	19.72	1.0	20	0	98.6	78 - 122	19.63	0.481	20	
sec-Butylbenzene	21.43	1.0	20	0	107	77 - 126	21.41	0.0823	20	
Styrene	19.43	1.0	20	0	97.2	78 - 123	20.01	2.9	20	
tert-Butylbenzene	21.49	1.0	20	0	107	78 - 124	21.13	1.68	20	
Tetrachloroethene	21.31	1.0	20	0	107	74 - 129	21.97	3.06	20	
Toluene	20.2	1.0	20	0	101	80 - 121	20.77	2.76	20	
trans-1,2-Dichloroethene	18.02	1.0	20	0	90.1	75 - 124	18.52	2.76	20	
trans-1,3-Dichloropropene	18.94	1.0	20	0	94.7	73 - 127	18.49	2.4	20	
Trichloroethene	19.61	1.0	20	0	98.1	79 - 123	21.16	7.58	20	
Trichlorofluoromethane	17.03	1.0	20	0	85.2	65 - 141	17.99	5.45	20	
Vinyl chloride	17.04	1.0	20	0	85.2	58 - 137	18.18	6.49	20	
Surr: 1,2-Dichloroethane-d4	*41.92*	*1.0*	*50*	*0*	*83.8*	*81 - 118*	*43.76*	*4.3*	*20*	
Surr: 4-Bromofluorobenzene	*50*	*1.0*	*50*	*0*	*100.0*	*85 - 114*	*51.42*	*2.8*	*20*	
Surr: Dibromofluoromethane	*43.54*	*1.0*	*50*	*0*	*87.1*	*80 - 119*	*45.34*	*4.04*	*20*	
Surr: Toluene-d8	*51*	*1.0*	*50*	*0*	*102*	*89 - 112*	*51.03*	*0.0545*	*20*	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120908-03MSD** Units: **ug/L** Analysis Date: **29-Dec-2020 16:25**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903421** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.73	1.0	20	0	104	78 - 124	21.61	4.14	20	
1,1,1-Trichloroethane	19.26	1.0	20	0	96.3	74 - 131	20.04	3.96	20	
1,1,2,2-Tetrachloroethane	20.8	1.0	20	0	104	71 - 121	21.51	3.35	20	
1,1,2-Trichloroethane	20.46	1.0	20	0	102	80 - 119	19.85	3.03	20	
1,1-Dichloroethane	18.24	1.0	20	0	91.2	77 - 125	18.66	2.25	20	
1,1-Dichloroethene	17.06	1.0	20	0	85.3	71 - 131	18.81	9.81	20	
1,1-Dichloropropene	20.46	1.0	20	0	102	78 - 125	21.61	5.49	20	
1,2,3-Trichlorobenzene	22.38	1.0	20	0	112	69 - 129	22.76	1.67	20	
1,2,3-Trichloropropane	20.3	1.0	20	0	102	73 - 122	19.83	2.33	20	
1,2,4-Trichlorobenzene	21.91	1.0	20	0	110	69 - 130	23.03	4.96	20	
1,2,4-Trimethylbenzene	22.2	1.0	20	0	111	76 - 124	23.43	5.38	20	
1,2-Dibromo-3-chloropropane	19.92	1.0	20	0	99.6	62 - 128	21.68	8.42	20	
1,2-Dibromoethane	19.5	1.0	20	0	97.5	77 - 121	20.03	2.66	20	
1,2-Dichlorobenzene	21.13	1.0	20	0	106	80 - 119	21.49	1.67	20	
1,2-Dichloroethane	18.74	1.0	20	0	93.7	73 - 128	18.99	1.35	20	
1,2-Dichloropropane	19.86	1.0	20	0	99.3	78 - 122	20.59	3.61	20	
1,3,5-Trimethylbenzene	22.03	1.0	20	0	110	75 - 124	22.83	3.59	20	
1,3-Dichlorobenzene	21.32	1.0	20	0	107	80 - 119	22.46	5.2	20	
1,3-Dichloropropane	20.35	1.0	20	0	102	80 - 119	20.32	0.135	20	
1,4-Dichlorobenzene	21.54	1.0	20	0	108	79 - 118	22.68	5.19	20	
2,2-Dichloropropane	18.64	1.0	20	0	93.2	60 - 139	19.61	5.1	20	
2-Butanone	34.16	2.0	40	0	85.4	56 - 143	32.64	4.54	20	
2-Chlorotoluene	22.79	1.0	20	0	114	79 - 122	24.08	5.5	20	
2-Hexanone	34.09	2.0	40	0	85.2	57 - 139	33.32	2.29	20	
4-Chlorotoluene	22.32	1.0	20	0	112	78 - 122	23.06	3.27	20	
4-Isopropyltoluene	22.23	1.0	20	0	111	77 - 127	22.35	0.526	20	
4-Methyl-2-pentanone	36.55	2.0	40	0	91.4	67 - 130	34.15	6.8	20	
Acetone	24	2.0	40	0	60.0	39 - 160	23.26	3.13	20	
Benzene	19.98	1.0	20	0	99.9	79 - 120	20.79	3.98	20	
Bromobenzene	21.59	1.0	20	0	108	80 - 120	22.25	3.02	20	
Bromochloromethane	18.37	1.0	20	0	91.8	78 - 123	18.74	2.01	20	
Bromodichloromethane	20.76	1.0	20	0	104	79 - 125	20.23	2.58	20	
Bromoform	20.44	1.0	20	0	102	66 - 130	20.19	1.22	20	
Bromomethane	18	1.0	20	0	90.0	53 - 141	18.69	3.75	20	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS20120908-03MSD** Units: **ug/L** Analysis Date: **29-Dec-2020 16:25**
Client ID: Run ID: **VOA6_375590** SeqNo: **5903421** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	40.55	2.0	40	0	101	64 - 133	43.17	6.25	20	
Carbon tetrachloride	22.86	1.0	20	0	114	72 - 136	24.25	5.91	20	
Chlorobenzene	19.97	1.0	20	0	99.8	82 - 118	20.62	3.2	20	
Chloroethane	20.92	1.0	20	0	105	60 - 138	17.85	15.8	20	
Chloroform	18.17	1.0	20	0	90.9	79 - 124	19.02	4.54	20	
Chloromethane	14.45	1.0	20	0	72.3	50 - 139	15.16	4.82	20	
cis-1,2-Dichloroethene	18.35	1.0	20	0	91.8	78 - 123	19.69	7.02	20	
cis-1,3-Dichloropropene	20	1.0	20	0	100	75 - 124	19.93	0.338	20	
Dibromochloromethane	20.08	1.0	20	0	100	74 - 126	20.03	0.283	20	
Dibromomethane	20.03	1.0	20	0	100	79 - 123	19.64	1.95	20	
Dichlorodifluoromethane	16.35	1.0	20	0	81.7	32 - 152	17.3	5.67	20	
Ethylbenzene	21.37	1.0	20	0	107	79 - 121	22.11	3.4	20	
Hexachlorobutadiene	23.53	1.0	20	0	118	66 - 134	24.37	3.5	20	
Isopropylbenzene	21.23	1.0	20	0	106	72 - 131	22.36	5.17	20	
m,p-Xylene	40.99	2.0	40	0	102	80 - 121	43.27	5.41	20	
Methylene chloride	17.86	2.0	20	0	89.3	74 - 124	18.38	2.9	20	
Naphthalene	20.95	1.0	20	0	105	61 - 128	19.85	5.36	20	
n-Butylbenzene	22.66	1.0	20	0	113	75 - 128	23.03	1.62	20	
n-Propylbenzene	22.54	1.0	20	0	113	76 - 126	23.56	4.42	20	
o-Xylene	20.15	1.0	20	0	101	78 - 122	20.73	2.85	20	
sec-Butylbenzene	22.57	1.0	20	0	113	77 - 126	23.25	2.98	20	
Styrene	19.94	1.0	20	0	99.7	78 - 123	20.65	3.53	20	
tert-Butylbenzene	22.59	1.0	20	0	113	78 - 124	23.48	3.87	20	
Tetrachloroethene	21.97	1.0	20	0	110	74 - 129	23.26	5.68	20	
Toluene	20.74	1.0	20	0	104	80 - 121	21.37	3	20	
trans-1,2-Dichloroethene	18.56	1.0	20	0	92.8	75 - 124	19.8	6.46	20	
trans-1,3-Dichloropropene	19.28	1.0	20	0	96.4	73 - 127	19.76	2.47	20	
Trichloroethene	20.89	1.0	20	1.071	99.1	79 - 123	21.32	2.03	20	
Trichlorofluoromethane	17.27	1.0	20	0	86.4	65 - 141	18.81	8.56	20	
Vinyl chloride	18.38	1.0	20	0	91.9	58 - 137	19.19	4.32	20	
Surr: 1,2-Dichloroethane-d4	*41.62*	*1.0*	*50*	*0*	*83.2*	*81 - 118*	*42.5*	*2.11*	*20*	
Surr: 4-Bromofluorobenzene	*48.97*	*1.0*	*50*	*0*	*97.9*	*85 - 114*	*49.25*	*0.566*	*20*	
Surr: Dibromofluoromethane	*44.72*	*1.0*	*50*	*0*	*89.4*	*80 - 119*	*44.88*	*0.352*	*20*	
Surr: Toluene-d8	*50.61*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.99*	*0.742*	*20*	

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: HS20121018

QC BATCH REPORT

Batch ID: R375590 (0)	Instrument: VOA6	Method: VOLATILES ORGANICS BY METHOD 8260C

The following samples were analyzed in this batch:

HS20121018-01	HS20121018-02	HS20121018-03	HS20121018-04
HS20121018-05	HS20121018-06	HS20121018-07	HS20121018-08
HS20121018-10			

ALS Houston, US Date: 05-Jan-21

Client: Bhate Environmental Associates, Inc.
Project: LHAAP 18 24
WorkOrder: **HS20121018**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 05-Jan-21

Sample Receipt Checklist

Work Order ID: HS20121018 **Date/Time Received:** **19-Dec-2020 11:12**

Client Name: Bhate Environmental **Received by:** **Paresh M. Giga**

Completed By: /S/ Paresh M. Giga (eSignature) 19-Dec-2020 15:54 (Date/Time) **Reviewed by:** /S/ RJ Modashia (eSignature) 21-Dec-2020 19:49 (Date/Time)

Matrices: **GW/Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.8C U/c	IR31
Cooler(s)/Kit(s):	4251	
Date/Time sample(s) sent to storage:	12/21/2020 12:00	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

bhate
1608 13th Avenue South, Suite 300
Birmingham Alabama 35205
Tel: 205-918-4000
Fax: 205-918-4050

Chain of Custody and Analytical Request

Page: of

Project/Phase No: NWO1312.0150

COC Number(1):

LIMS Number:

Facility/Base I.D.: LHAAP

Project/Site Name: LHAAP / Site 18/24

Client Name:

Collected by: Scott Beesinger

Field Sample ID (30 Characters Max)	Date Collected (dd-mmm-yyyy)	Time Collected (Military) (hhmm)	Sample Depth (beginning - ending)	SA Code (2)	Sample Number (3)	Sample Matrix (4)	Number of containers	VOC	PERCHLORATE	TOTAL METALS	1, 4 - DIOXANE	Ambient Blank Lot Control Number	Equipment Blank Lot Control Number	Trip Blank Lot Control Number	Cooler ID
MW8-121720	17 DEC 2020	0810	-		N	WG	5	X	X		X				
MW18-121720	17 DEC 2020	0900	-		N	WG	4	X	X						
MW18-121720-FD	17 DEC 2020	0900	-		FD	WG	4	X	X						
C08-121720	17 DEC 2020	0950			N	WG	6	X	X	X	X				
125-121720	17 DEC 2020	1005			N	WG	5	X	X	X					
126-121720	17 DEC 2020	1055	-		N	WG	6	X	X	X	X				
C09-121720	17 DEC 2020	1140	-		N	WG	5	X	X	X					
C09-121720-FD	17 DEC 2020	1140	-		FD	WG	5	X	X	X					
18CPTMW16-121720	17 DEC 2020	1235	-		N	WG	2		X		X				
TRIP BLANK	17 DEC 2020		-		TB	W	2	X							
			-												

Sample Analysis Requested (5) | Quality Assurance Samples (6)

HS20121018

Bhate Environmental Associates, Inc.
LHAAP 18 24

COMMENTS:

Custody Transfers Prior to Receipt by Laboratory

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1. Scott Beesinger	12/17/20	1430	1.	12/18/2020	11:12
2.			2.		
3.			3.		

Sample Delivery Details / Laboratory Receipt

Delivered Directly to Lab: Shipped No.:

Method of Shipment:

Fed Ex Airbill Number:

Analytical Lab: ALS 10450 Stanlliff Rd. Suite 210 Houston, TX 77099 (281) 530-5656

ATTN: SONIA WEST Lab Recipient: Delivery Date/Time:

1.) Chain of Custody Number = date collected + custody number (e.g. 09-02-1999-01)

2.) Sample Type (SA) Codes: N = Normal Sample, TB = Trip Blank (-c) Sample, FD = Field Duplicate (-a) Samples, FR = Field Replicate (-b) Samples, EB = Equipment Blank (-d) Samples, MS = Matrix Spike, SD = Matrix Spike Duplicate, AB = Ambient Blank (-e)

3.) Sample Number: Unique sample number collected from a particular location per day. (e.g. Groundwater sample collected from MW-1 on 10/10/99 = 01, if sampled again on 10/10/99 = 02, etc.)

4.) Matrix Codes: GS = Soil Gas, WG = Groundwater, WS = Surface Water, SO = Soil, SE = Sediment, SL = Sludge, SS = Surface Soil Samples, WQ = Aqueous Blank Samples (trip, equipment, ambient, etc), SQ = Soil Blanks

5.) Sample Analysis Requested: Analytical method requested and number of containers provided for each.

6.) Quality assurance samples are assigned by date (ddmmyy) and the sample number associated with the sample (01, 02, etc) (e.g. Equipment blank collected in association with MW-1 on 10/10/99 will be designated 10109901 in the Equipment Blank Lot Control

4251 COC: 8°
431 Chlo.

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

4251

CUSTODY SEAL

Date: 12/17/20 Time: 1430
Name: Scott Beesinger
Company: Bhate

Seal Broken By: RT
Date: 12/19/20

4251 DEC 19 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

4251

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09NOV20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 26x14x14 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-18/24-BO-74789-RJ

RMA:

FedEx Express

TRK# 0221 1891 8882 6044

RETURNS MON-SAT
PRIORITY OVERNIGHT

December 30, 2020 Service Request No:E2001242

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20121018

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory December 22, 2020
For your reference, these analyses have been assigned our service request number **E2001242.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001242
Project:	HS20121018	**Date Received:**	12/22/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Nine samples were received for analysis at ALS Environmental in Houston on 12/22/20.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000704: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS & recoveries are within QC limits. The MS and MSD were performed on an unrelated sample.

Samples E2001242-002/-003/-004/-006/-007/-008/-009 were analyzed at a dilution due to matrix interference with the Internal Standard at a 1x DF.

DoD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001242
Project: HS20121018

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001242-001	MW-8_12172020	12/17/2020	0810
E2001242-002	MW-18_12172020	12/17/2020	0900
E2001242-003	MW-18_12172020_a	12/17/2020	0900
E2001242-004	C08_12172020	12/17/2020	0950
E2001242-005	125_12172020	12/17/2020	1005
E2001242-006	126_12172020	12/17/2020	1055
E2001242-007	C09_12172020	12/17/2020	1140
E2001242-008	C09_12172020_a	12/17/2020	1140
E2001242-009	18CPTMW16_121720	12/17/2020	1235

Service Request Summary

Folder #: **E2001242**
Client Name: ALS Environmental - US
Project Name: HS20121018
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 12/22/20
Internal Due Date: 1/6/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20121018
EDD: No EDD Specified

9 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001242-001	MW-8_12172020	Ground Water	12/17/20 0810	**IV**
E2001242-002	MW-18_12172020	Ground Water	12/17/20 0900	**IV**
E2001242-003	MW-18_12172020_a	Ground Water	12/17/20 0900	**IV**
E2001242-004	C08_12172020	Ground Water	12/17/20 0950	**IV**
E2001242-005	125_12172020	Ground Water	12/17/20 1005	**IV**
E2001242-006	126_12172020	Ground Water	12/17/20 1055	**IV**
E2001242-007	C09_12172020	Ground Water	12/17/20 1140	**IV**
E2001242-008	C09_12172020_a	Ground Water	12/17/20 1140	**IV**
E2001242-009	18CPTMW16_121720	Ground Water	12/17/20 1235	**IV**

Service Request Summary

Folder #: **E2001242**
Client Name: ALS Environmental - US
Project Name: HS20121018
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
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Fax Number: 281-530-5887
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Project Chemist: Corey Grandits
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Date Received: 12/22/20
Internal Due Date: 1/6/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20121018
EDD: No EDD Specified

9 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	9	level II 1/6,level IV due 1/13

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID:** **15365**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20121018
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20121018-01**	**MW-8_12172020**	**Groundwater**	**17 Dec 2020 08:10**
	Provide Level II and Level IV reports in separate pdf			06 Jan 2021
2.	**HS20121018-02**	**MW-18_12172020**	**Groundwater**	**17 Dec 2020 09:00**
	Provide Level II and Level IV reports in separate pdf			06 Jan 2021
3.	**HS20121018-03**	**MW-18_12172020-a**	**Groundwater**	**17 Dec 2020 09:00**
	Provide Level II and Level IV reports in separate pdf			06 Jan 2021
4.	**HS20121018-04**	**C08_12172020**	**Groundwater**	**17 Dec 2020 09:50**
	Provide Level II and Level IV reports in separate pdf			06 Jan 2021
5.	**HS20121018-05**	**125_12172020**	**Groundwater**	**17 Dec 2020 10:05**
	Provide Level II and Level IV reports in separate pdf			06 Jan 2021
6.	**HS20121018-06**	**126_12172020**	**Groundwater**	**17 Dec 2020 10:55**
	Provide Level II and Level IV reports in separate pdf			06 Jan 2021
7.	**HS20121018-07**	**C09_12172020**	**Groundwater**	**17 Dec 2020 11:40**
	Provide Level II and Level IV reports in separate pdf			06 Jan 2021
8.	**HS20121018-08**	**C09_12172020-a**	**Groundwater**	**17 Dec 2020 11:40**
	Provide Level II and Level IV reports in separate pdf			06 Jan 2021
9.	**HS20121018-09**	**18CPTMW16_121720**	**Groundwater**	**17 Dec 2020 12:35**

Subcontract Chain of Custody

SAMPLING STATE: **Texas** **COC ID: 15365**

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
Provide Level II and Level IV reports in separate pdf			06 Jan 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 12/22/20 0858

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1821

Date/Time Received: 12/22/20 Initials: CH Date/Time Logged in: 12/22/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ◉ ALS Courier ○ Client

2. Samples received in: ◉ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ◉ No
   Were they intact? ○ Yes ○ No ◉ N/A
   Were they signed and dated? ○ Yes ○ No ◉ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ◉ Baggies ○ Bubble Wrap ○ Gel Packs ◉ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		12/22/20	0858	CH	3.7	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ◉ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ◉ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ◉ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ◉ Yes ○ No
10. Did sample labels and tags agree with custody documents? ◉ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 371929 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/22/20 09:11

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001238-001	MW9_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2001238-002	18CPTMW10SW_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2001238-003	18CPTMW10DW_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2001238-004	18WW06_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001238-005	18WW02_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001238-006	18WW10_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001238-007	MW17_121620	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001242-001	MW-8_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001242-002	MW-18_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001242-003	MW-18_12172020_a	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001242-004	C08_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001242-005	125_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001242-006	126_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001242-007	C09_12172020	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001242-008	C09_12172020_a	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001242-009	18CPTMW16_121720	.01	6850/ClO4 DOD			Ground Water	10mL	
17	EQ2000704-01	MB		6850/ClO4 DOD			Liquid	10mL	
18	EQ2000704-02	LCS		6850/ClO4 DOD			Liquid	10mL	
19	EQ2000704-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000704-04	18CPTMW10DW_121620 MS	.01	6850/ClO4 DOD			Liquid	10mL	
21	EQ2000704-05	18CPTMW10DW_121620 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000704-02	1.00µL	EQ2000704-03	1.00µL	EQ2000704-04	1.00µL	EQ2000704-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 214133 Logbook Ref: Sodium Perchlorate Expires On: 08/13/2022

E2001238-001	100.00µL	E2001238-002	100.00µL	E2001238-003	100.00µL	E2001238-004	100.00µL	E2001238-005	100.00µL	E2001238-006	100.00µL
E2001238-007	100.00µL	E2001242-001	100.00µL	E2001242-002	100.00µL	E2001242-003	100.00µL	E2001242-004	100.00µL	E2001242-005	100.00µL
E2001242-006	100.00µL	E2001242-007	100.00µL	E2001242-008	100.00µL	E2001242-009	100.00µL	EQ2000704-01	100.00µL	EQ2000704-02	100.00µL
EQ2000704-03	100.00µL	EQ2000704-04	100.00µL	EQ2000704-05	100.00µL						

Preparation Information Benchsheet

Prep Run#: 371929 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 12/22/20 09:11

Preparation Steps

Step: Preparation
Started: 12/22/20 09:11
Finished: 12/22/20 14:30
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 12/22/20

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 0810
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	MW-8_12172020	**Units:**	µg/L
Lab Code:	E2001242-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**2480**		10.0	5.00	2.50	100	12/22/20	12/29/20 19:25	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 0900
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	MW-18_12172020	**Units:**	µg/L
Lab Code:	E2001242-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/22/20	12/29/20 19:33	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 0900
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	MW-18_12172020_a	**Units:**	µg/L
Lab Code:	E2001242-003	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/22/20	12/29/20 19:41	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 0950
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	C08_12172020	**Units:**	µg/L
Lab Code:	E2001242-004	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/22/20	12/29/20 19:49	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 1005
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	125_12172020	**Units:**	µg/L
Lab Code:	E2001242-005	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**2330**		10.0	5.00	2.50	100	12/22/20	12/29/20 19:57	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 1055
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	126_12172020	**Units:**	µg/L
Lab Code:	E2001242-006	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	1.00	0.500	0.250	10	12/22/20	12/30/20 11:43	371929	708720	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 1140
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	C09_12172020	**Units:**	µg/L
Lab Code:	E2001242-007	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	2.00	1.00	0.500	20	12/22/20	12/30/20 13:42	371929	708720	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 1140
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	C09_12172020_a	**Units:**	µg/L
Lab Code:	E2001242-008	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	2.00	1.00	0.500	20	12/22/20	12/30/20 13:50	371929	708720	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	12/17/20 1235
Sample Matrix:	Ground Water	**Date Received:**	12/22/20
Sample Name:	18CPTMW16_121720	**Units:**	µg/L
Lab Code:	E2001242-009	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.200	0.100	0.0500	2	12/22/20	12/29/20 20:36	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000704-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	12/22/20	12/29/20 17:42	371929	708667	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Analyzed:**	12/29/20
Sample Matrix:	Ground Water		

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	371929

	Lab Control Sample EQ2000704-02			Duplicate Lab Control Sample EQ2000704-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.107	0.100	107	0.0963	0.100	96	84 - 119	10	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000704-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.107**		0.100	0.0500	0.0250	1	12/22/20	12/29/20 17:50	371929	708667	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001242
Project:	HS20121018	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000704-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0963**	J	0.100	0.0500	0.0250	1	12/22/20	12/29/20 17:58	371929	708667	

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WorkOrder: HS20100285

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

20-Oct-2020

ALS Environmental
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Houston, TX 77099
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HS20100285 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20100285

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

October 15, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20100285**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Oct 07, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20100285

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20100285-01	LH18/24-SP650_100620	Water		06-Oct-2020 14:00	07-Oct-2020 09:20	☐
HS20100285-02	LH18/24-SP650_100620-AIX	Water		06-Oct-2020 14:00	07-Oct-2020 09:20	☐
HS20100285-03	LH18/24-SP650_100620-BIX	Water		06-Oct-2020 14:00	07-Oct-2020 09:20	☐

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20100285

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

WetChemistry by Method E350.3

Batch ID: R370327

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R370156

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20100285
Sample ID: LH18/24-SP650_100620
Lab ID:HS20100285-01
Collection Date: 06-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**11**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	12-Oct-2020 16:35
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.86**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	07-Oct-2020 08:13
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	15-Oct-2020 09:45

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20100285
Sample ID: LH18/24-SP650_100620-AIX
Lab ID:HS20100285-02
Collection Date: 06-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: KMB
Subcontract Analysis	See Attached		0	0		NA	1	12-Oct-2020 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20100285
Sample ID: LH18/24-SP650_100620-BIX
Lab ID:HS20100285-03
Collection Date: 06-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: KMB
Subcontract Analysis	See Attached		0	0		NA	1	12-Oct-2020 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20100285

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R370156 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20100285-01	LH18/24-SP650_100620	06 Oct 2020 14:00			07 Oct 2020 08:13	10
Batch ID: R370319 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20100285-02	LH18/24-SP650_100620-AIX	06 Oct 2020 14:00			12 Oct 2020 16:20	1
HS20100285-03	LH18/24-SP650_100620-BIX	06 Oct 2020 14:00			12 Oct 2020 16:20	1
Batch ID: R370327 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20100285-01	LH18/24-SP650_100620	06 Oct 2020 14:00			12 Oct 2020 16:35	1
Batch ID: R370525 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20100285-01	LH18/24-SP650_100620	06 Oct 2020 14:00			15 Oct 2020 09:45	1

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20100285

QC BATCH REPORT

Batch ID: R370156 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-370156** Units: **mg/L** Analysis Date: **07-Oct-2020 08:13**
Client ID: Run ID: **UV-2450_370156** SeqNo: **5772676** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-370156** Units: **mg/L** Analysis Date: **07-Oct-2020 08:13**
Client ID: Run ID: **UV-2450_370156** SeqNo: **5772677** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.253	0.0250	0.25	0	101	85 - 115				

MS Sample ID: **HS20100290-01MS** Units: **mg/L** Analysis Date: **07-Oct-2020 08:13**
Client ID: Run ID: **UV-2450_370156** SeqNo: **5772679** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.27	0.0250	0.25	0.011	104	80 - 120				

MSD Sample ID: **HS20100290-01MSD** Units: **mg/L** Analysis Date: **07-Oct-2020 08:13**
Client ID: Run ID: **UV-2450_370156** SeqNo: **5772680** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.271	0.0250	0.25	0.011	104	80 - 120	0.27	0.37	20	

The following samples were analyzed in this batch: HS20100285-01

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20100285

QC BATCH REPORT

Batch ID: R370327 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-370327** Units: **mg/L** Analysis Date: **12-Oct-2020 16:35**
Client ID: Run ID: **WetChem_HS_370327** SeqNo: **5777299** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-370327** Units: **mg/L** Analysis Date: **12-Oct-2020 16:35**
Client ID: Run ID: **WetChem_HS_370327** SeqNo: **5777300** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.57	0.20	10	0	106	80 - 120				

MS Sample ID: **HS20100285-01MS** Units: **mg/L** Analysis Date: **12-Oct-2020 16:35**
Client ID: **LH18/24-SP650_100620** Run ID: **WetChem_HS_370327** SeqNo: **5777302** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	20.33	0.20	10	10.72	96.2	80 - 120				

MSD Sample ID: **HS20100285-01MSD** Units: **mg/L** Analysis Date: **12-Oct-2020 16:35**
Client ID: **LH18/24-SP650_100620** Run ID: **WetChem_HS_370327** SeqNo: **5777303** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	20.42	0.20	10	10.72	97.0	80 - 120	20.33	0.412	20	

The following samples were analyzed in this batch: HS20100285-01

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20100285**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 15-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20100285

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20100285-01	LH18/24-SP650_100620	Login	10/7/2020 3:54:32 PM	JRM	WET214
HS20100285-01	LH18/24-SP650_100620	Login	10/7/2020 3:54:32 PM	JRM	WET214
HS20100285-01	LH18/24-SP650_100620	Login	10/7/2020 3:54:32 PM	JRM	Sub
HS20100285-02	LH18/24-SP650_100620-AIX	Login	10/7/2020 3:54:32 PM	JRM	Sub
HS20100285-03	LH18/24-SP650_100620-BIX	Login	10/7/2020 3:54:32 PM	JRM	Sub

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_100620	Water	10/06/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_100620	Water	10/06/20 / 14:00		1			X		NONE	
LH18/24–SP650_100620_AIX	Water	10/06/20 / 14:00		1				X	NONE	
LH18/24-SP650_100620_BIX	Water	10/06/20 / 14:00		1				X	NONE	

Additional Remarks: **3 DAY TAT ON PERCHLORATE. Standard TAT on all other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	10/06/20	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mascorro	10/7/20	09:20							

Remarks:
Cooler 44785 Temp 3.8°C IR31 CF0

HS20100285

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

(Word) S:\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

44785

CUSTODY SEAL

Date: 10/6/20 Time: 1430
Name: Scott Beesinger
Company: Smith

Seal Broken By:
Date: 10/07/20

44785 0832 / 0.100 OCT 0 7 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

44785

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 08SEP20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 19x16x13 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: ADDITIONAL BOTTLES - BO 73609 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1522

WED - 07 OCT 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

8475072 10/06 5833J/0276/B765

October 12, 2020 Service Request No:E2000949

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20100285

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 08, 2020
For your reference, these analyses have been assigned our service request number **E2000949.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000949
Project:	HS20100285	**Date Received:**	10/08/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two were received for analysis at ALS Environmental in Houston on 10/08/20.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000497: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The batch precision (MS/DMS) measurements were determined on another order in the extraction batch. The MS/DMS results are not included in this report. The LCS and LCSD recoveries passed.

DOD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2000949
Project: HS20100285

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000949-001	LH18/24-SP650_100620-AIX	10/6/2020	1400
E2000949-002	LH18/24-SP650_100620-BIX	10/6/2020	1400

Service Request Summary

Folder #: **E2000949**
Client Name: ALS Environmental - US
Project Name: HS20100285
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/08/20
Internal Due Date: 10/12/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20100285
EDD: No EDD Specified

2 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 6B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000949-001	LH18/24-SP650_100620-AIX	Water	10/06/20 1400	**IV**
E2000949-002	LH18/24-SP650_100620-BIX	Water	10/06/20 1400	**IV**

Service Request Summary

Folder #: **E2000949**
Client Name: ALS Environmental - US
Project Name: HS20100285
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/08/20
Internal Due Date: 10/12/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20100285
EDD: No EDD Specified

2 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 6B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	2	Level II due 10/12,level IV 10/28

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

ALS

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

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Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14869**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100285
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100285-02**	**LH18/24-SP650_100620-AIX**	**Water**	**06 Oct 2020 14:00**
	SUB_Perch-6850			16 Oct 2020
2.	**HS20100285-03**	**LH18/24-SP650_100620-BIX**	**Water**	**06 Oct 2020 14:00**
	SUB_Perch-6850			16 Oct 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 10/8/20 1000

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-HI

Thermometer ID IR#1

Date/Time Received: 10/8/20 Initials: CG

Date/Time Logged in: 10/8/20 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other _____

3. Were custody seals on coolers? ○ Yes ✓ No

If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other _____

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling: _____

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		10/8/20	1000	CG	3.1	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 367345 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 10/9/20 11:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000943-001	50WW29-201001	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2000943-002	50WW05-201001	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000944-001	50WW14-201001	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2000944-002	50WW13-201001	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2000944-003	50WW11-201001	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000944-004	50WW11-201001-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000944-005	50WW06-201001	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000944-006	50WW12-201001	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000949-001	LH18/24-SP650_100620-AIX	.01	6850/ClO4 DOD			Water	10mL	
10	E2000949-002	LH18/24-SP650_100620-BIX	.01	6850/ClO4 DOD			Water	10mL	
11	E2000964-001	50WW09-201005	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000964-002	50WW08-201005	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000964-003	50WW22-201005	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000964-004	50WW23-201005	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000964-005	50WW15-201005	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000964-006	50WW16-201005	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2000964-007	50WW18-201005	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2000964-008	50WW1-201005-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
19	EQ2000497-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000497-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000497-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000497-04	50WW14-201001 MS	.02	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000497-05	50WW14-201001 DMS	.03	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000497-02	1.00µL	EQ2000497-03	1.00µL	EQ2000497-04	1.00µL	EQ2000497-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000943-001	100.00µL	E2000943-002	100.00µL	E2000944-001	100.00µL	E2000944-002	100.00µL	E2000944-003	100.00µL	E2000944-004	100.00µL
E2000944-005	100.00µL	E2000944-006	100.00µL	E2000949-001	100.00µL	E2000949-002	100.00µL	E2000964-001	100.00µL	E2000964-002	100.00µL
E2000964-003	100.00µL	E2000964-004	100.00µL	E2000964-005	100.00µL	E2000964-006	100.00µL	E2000964-007	100.00µL	E2000964-008	100.00µL
EQ2000497-01	100.00µL	EQ2000497-02	100.00µL	EQ2000497-03	100.00µL	EQ2000497-04	100.00µL	EQ2000497-05	100.00µL		

Preparation Information Benchsheet

Prep Run#: 367345 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 10/9/20 11:34

Preparation Steps

Step: Preparation
Started: 10/9/20 11:34
Finished: 10/9/20 13:30
By: KBROWN
Comments

Comments: _____

Reviewed By: KB Date: 10/9/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000949
Project:	HS20100285	**Date Collected:**	10/ 6/20 1400
Sample Matrix:	Water	**Date Received:**	10/ 8/20
		Date Extracted:	10/9/20
		Date Analyzed:	10/9/20 17:14
Sample Name:	LH18/24-SP650_100620-AIX	**Units:**	µg/L
Lab Code:	E2000949-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	698929
Prep Method:	Method	**Extraction Lot:**	367345
Data File Name:	I:\LCMS01\DATA\20201009\20201009_021	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000949
Project:	HS20100285	**Date Collected:**	10/ 6/20 1400
Sample Matrix:	Water	**Date Received:**	10/ 8/20
		Date Extracted:	10/9/20
		Date Analyzed:	10/9/20 17:22
Sample Name:	LH18/24-SP650_100620-BIX	**Units:**	µg/L
Lab Code:	E2000949-002	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	698929
Prep Method:	Method	**Extraction Lot:**	367345
Data File Name:	I:\LCMS01\DATA\20201009\20201009_022	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000949
Project:	HS20100285	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/9/20
		Date Analyzed:	10/9/20 15:24
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000497-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	698929
Prep Method:	Method	**Extraction Lot:**	367345
Data File Name:	I:\LCMS01\DATA\20201009\20201009_007	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20100285
Sample Matrix: Water

Service Request: E2000949
Date Analyzed: 10/ 9/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 367345

	Lab Control Sample EQ2000497-02			Duplicate Lab Control Sample EQ2000497-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0996	0.100	100	0.111	0.100	111	84 - 119	11	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000949
Project:	HS20100285	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/9/20
		Date Analyzed:	10/9/20 15:32
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000497-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	698929
Prep Method:	Method	**Extraction Lot:**	367345
Data File Name:	I:\LCMS01\DATA\20201009\20201009_008	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.0996**	J	0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000949
Project:	HS20100285	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/9/20
		Date Analyzed:	10/9/20 15:40
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000497-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method:	6850	**Analysis Lot:**	698929
Prep Method:	Method	**Extraction Lot:**	367345
Data File Name:	I:\LCMS01\DATA\20201009\20201009_009	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.111**		0.100	0.0500	0.0250	

ALS Environmental
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October 14, 2020

Analytical Report for Service Request No: K2009077

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20100285

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 09, 2020
For your reference, these analyses have been assigned our service request number **K2009077.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20100285
Sample Matrix: Water

Service Request: K2009077
Date Received: 10/09/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 10/09/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Davis Date 10/14/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
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K2009077

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14868**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100285
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100285-01**	**LH18/24-SP650_100620**	**Water**	**06 Oct 2020 14:00**
	TOC Analysis for DOD Level IV			16 Oct 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mussmann Date/Time: 10/08/20 18:00

Received By: [signature] Date/Time: 10/9/20 0945

Cooler ID(s): Temperature(s):

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

K2009077

Purchase Order

PO: HS20100285

VENDOR:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	14868
TSR:	Danielle Winnings

Item	Catalog No	Unit Price	Quantity	Ext Price
1. TOC Analysis for DOD Level IV	NA	$9.00	1	$9.00
			Order Total:	$9.00

PM Kelly

Cooler Receipt and Preservation Form

Client ALS Houston Service Request K20 09077

Received: 10.9.20 Opened: 10.9.20 By: AP Unloaded: 10.9.20 By: AP

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
0.9		IR02				1891 8881 3240	
			14885				
			14868				
			14867				

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2009077
Project:	HS20100285	**Date Collected:**	10/6/20
Sample Matrix:	Water	**Date Received:**	10/9/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_100620	K2009077-001	**2.13**	0.50	0.20	0.07	1	10/12/20 09:40	
Method Blank	K2009077-MB	ND U	0.50	0.20	0.07	1	10/12/20 09:40	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009077
Project	HS20100285	**Date Collected:**	10/06/20
Sample Matrix:	Water	**Date Received:**	10/09/20
		Date Analyzed:	10/12/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	LH18/24-SP650_100620	**Units:**	mg/L
Lab Code:	K2009077-001	**Basis:**	NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2009077-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	2.13	2.15	2.14	1	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009077
Project:	HS20100285	**Date Collected:**	10/06/20
Sample Matrix:	Water	**Date Received:**	10/09/20
		Date Analyzed:	10/12/20
		Date Extracted:	NA

Matrix Spike Summary
Carbon, Total Organic

Sample Name:	LH18/24-SP650_100620	**Units:**	mg/L
Lab Code:	K2009077-001	**Basis:**	NA
Analysis Method:	SM 5310 C		
Prep Method:	None		

Matrix Spike
K2009077-001MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	2.13	27.8	25.0	103	83-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009077
Project:	HS20100285	**Date Analyzed:**	10/12/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	699035

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2009077-LCS	24.5	25.0	98	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2009077
Project: HS20100285

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	699035	KQ2015392-11	10/12/20 09:40	25.0	25.2	101	90-110
CCV2	699035	KQ2015392-12	10/12/20 09:40	25.0	25.2	101	90-110
CCV3	699035	KQ2015392-13	10/12/20 09:40	25.0	24.9	100	90-110
CCV4	699035	KQ2015392-14	10/12/20 09:40	25.0	24.6	98	90-110
CCV5	699035	KQ2015392-15	10/12/20 09:40	25.0	24.8	99	90-110
CCV6	699035	KQ2015392-16	10/12/20 09:40	25.0	25.1	100	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2009077
Project: HS20100285

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	699035	KQ2015392-05	10/12/20 09:40	0.50	0.20	0.07	ND	U
CCB2	699035	KQ2015392-06	10/12/20 09:40	0.50	0.20	0.07	ND	U
CCB3	699035	KQ2015392-07	10/12/20 09:40	0.50	0.20	0.07	ND	U
CCB4	699035	KQ2015392-08	10/12/20 09:40	0.50	0.20	0.07	ND	U
CCB5	699035	KQ2015392-09	10/12/20 09:40	0.50	0.20	0.07	ND	U
CCB6	699035	KQ2015392-10	10/12/20 09:40	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # 8281 8395 8568 9077 9083

Tier: IV IV IV IV I

Date Analyzed: 10-12-20

Analyst: MK

Run # 699033 699032

Analysis: TOC/DOC

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: _____ Date: 10/13/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 699032 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2008281-001	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	11.87 mg/L	10 mL	11.9 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008281-002	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	7.36 mg/L	10 mL	7.36 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008281-003	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	7.24 mg/L	10 mL	7.24 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-001	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	4.48 mg/L	10 mL	4.48 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-002	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	4.56 mg/L	10 mL	4.56 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-003	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.03 mg/L	10 mL	2.03 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-004	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.84 mg/L	10 mL	1.84 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-005	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.81 mg/L	10 mL	1.81 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-006	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.80 mg/L	10 mL	1.80 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-007	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.80 mg/L	10 mL	1.80 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-009	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.73 mg/L	10 mL	1.73 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008395-010	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.80 mg/L	10 mL	1.80 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008568-001	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.85 mg/L	10 mL	1.85 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008568-002	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.67 mg/L	10 mL	1.67 mg/L	1	0.07	0.50			10/12/20	N	IV
K2008568-007	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	1.92 mg/L	10 mL	1.92 mg/L	1	0.07	0.50			10/12/20	Y	IV
KQ2015391-01	Carbon, Dissolved Organic (DOC)	DUP	K2008568-007	Surface Water	1.86 mg/L	10 mL	1.86 mg/L	1	0.07	0.50		3	10/12/20	N	IV
KQ2015391-02	Carbon, Dissolved Organic (DOC)	MS	K2008568-007	Surface Water	28.79 mg/L	10 mL	28.8 mg/L	1	0.07	0.50	107		10/12/20	N	IV
KQ2015391-03	Carbon, Dissolved Organic (DOC)	LCS		Surface Water	24.16 mg/L	10 mL	24.2 mg/L	1	0.07	0.50	97		10/12/20 09:40:00	N	IV
KQ2015391-04	Carbon, Dissolved Organic (DOC)	MB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20	N	IV
KQ2015391-05	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20	N	IV
KQ2015391-06	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20	N	IV
KQ2015391-07	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20	N	IV
KQ2015391-08	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 699032 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2015391-09	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20	N	IV
KQ2015391-10	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20	N	IV
KQ2015391-11	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	25.18 mg/L	10 mL	25.2 mg/L	1					10/12/20	N	IV
KQ2015391-12	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	25.15 mg/L	10 mL	25.2 mg/L	1					10/12/20	N	IV
KQ2015391-13	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	24.91 mg/L	10 mL	24.9 mg/L	1					10/12/20	N	IV
KQ2015391-14	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	24.59 mg/L	10 mL	24.6 mg/L	1					10/12/20	N	IV
KQ2015391-15	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	24.77 mg/L	10 mL	24.8 mg/L	1					10/12/20	N	IV
KQ2015391-16	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	25.10 mg/L	10 mL	25.1 mg/L	1					10/12/20	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 699035 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2008281-001	Carbon, Total Organic	N/A		Surface Water	12.65 mg/L	10 mL	12.7 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008281-002	Carbon, Total Organic	N/A		Surface Water	8.41 mg/L	10 mL	8.41 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008281-003	Carbon, Total Organic	N/A		Surface Water	7.51 mg/L	10 mL	7.51 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-001	Carbon, Total Organic	N/A		Surface Water	4.38 mg/L	10 mL	4.38 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-002	Carbon, Total Organic	N/A		Surface Water	4.57 mg/L	10 mL	4.57 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-003	Carbon, Total Organic	N/A		Surface Water	2.06 mg/L	10 mL	2.06 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-004	Carbon, Total Organic	N/A		Surface Water	1.97 mg/L	10 mL	1.97 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-005	Carbon, Total Organic	N/A		Surface Water	1.83 mg/L	10 mL	1.83 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-006	Carbon, Total Organic	N/A		Surface Water	1.82 mg/L	10 mL	1.82 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-007	Carbon, Total Organic	N/A		Surface Water	1.84 mg/L	10 mL	1.84 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-008	Carbon, Total Organic	N/A		Surface Water	1.86 mg/L	10 mL	1.86 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-009	Carbon, Total Organic	N/A		Surface Water	1.78 mg/L	10 mL	1.78 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2008395-010	Carbon, Total Organic	N/A		Surface Water	1.84 mg/L	10 mL	1.84 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2009077-001	Carbon, Total Organic	N/A		Water	2.13 mg/L	10 mL	2.13 mg/L	1	0.07	0.50			10/12/20 09:40:00	N	IV
K2009083-001	Carbon, Total Organic	N/A		Water	14.63 mg/L	10 mL	366 mg/L	25	2	13			10/12/20 09:40:00	N	I
KQ2015392-01	Carbon, Total Organic	DUP	K2009077-001	Water	2.15 mg/L	10 mL	2.15 mg/L	1	0.07	0.50		1	10/12/20 09:40:00	N	IV
KQ2015392-02	Carbon, Total Organic	MS	K2009077-001	Water	27.84 mg/L	10 mL	27.8 mg/L	1	0.07	0.50	103		10/12/20 09:40:00	N	IV
KQ2015392-03	Carbon, Total Organic	LCS		Surface Water	24.52 mg/L	10 mL	24.5 mg/L	1	0.07	0.50	98		10/12/20 09:40:00	N	IV
KQ2015392-04	Carbon, Total Organic	MB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20 09:40:00	N	IV
KQ2015392-05	Carbon, Total Organic	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20 09:40:00	N	IV
KQ2015392-06	Carbon, Total Organic	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20 09:40:00	N	IV
KQ2015392-07	Carbon, Total Organic	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20 09:40:00	N	IV
KQ2015392-08	Carbon, Total Organic	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20 09:40:00	N	IV
KQ2015392-09	Carbon, Total Organic	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20 09:40:00	N	IV
KQ2015392-10	Carbon, Total Organic	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/12/20 09:40:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 699035 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2015392-11	Carbon, Total Organic	CCV		Surface Water	25.18 mg/L	10 mL	25.2 mg/L	1					10/12/20 09:40:00	N	IV
KQ2015392-12	Carbon, Total Organic	CCV		Surface Water	25.15 mg/L	10 mL	25.2 mg/L	1					10/12/20 09:40:00	N	IV
KQ2015392-13	Carbon, Total Organic	CCV		Surface Water	24.91 mg/L	10 mL	24.9 mg/L	1					10/12/20 09:40:00	N	IV
KQ2015392-14	Carbon, Total Organic	CCV		Surface Water	24.59 mg/L	10 mL	24.6 mg/L	1					10/12/20 09:40:00	N	IV
KQ2015392-15	Carbon, Total Organic	CCV		Surface Water	24.77 mg/L	10 mL	24.8 mg/L	1					10/12/20 09:40:00	N	IV
KQ2015392-16	Carbon, Total Organic	CCV		Surface Water	25.10 mg/L	10 mL	25.1 mg/L	1					10/12/20 09:40:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

DOC = 699032
TOC = 699035

Schedule: 101220

Version: 7
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/10/12 20:39 - Monday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B (1)	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2009083-001 25X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2008281-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2008281-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2008281-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2008281-001*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2008281-002*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2008281-003*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B (2)	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2009077-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2009077-001D	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2009077-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2008395-001*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2008395-002*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2008395-003*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2008395-004*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2008395-005*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2008395-006*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2008395-007*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B (3)	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2008395-009*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2008395-010*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2008395-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2008395-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2008395-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2008395-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2008395-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2008395-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B (4)	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2008395-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2008395-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2008395-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	K2008395-010	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
33	Sample	K2008568-001*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2008568-002*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	K2008568-007*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2008568-007D*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
37	Sample	K2008568-007MS*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready

Schedule: 101220

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
39	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 101220
Monday, October 12, 2020 09:40 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/10/13 09:47 - Tuesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	101220	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1) Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v3) Fusion1 (Fusion1) (v5) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v7)		
Comment:			

* DOC

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/12 09:40

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.17	27.73	15.56	49.57	05:29
2	TC Clean	13.44	26.83	13.39	49.86	07:20
3	TC Clean	2.14	15.38	13.24	49.86	07:04
4	TC Clean	1.61	14.63	13.02	49.98	03:59

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/12 10:11

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.64	25.60	12.96	49.68	05:28
2	TC Clean	4.13	17.27	13.14	49.96	04:08

3	TC Clean	0.92	14.17	13.24	50.01	03:51
4	TC Clean	0.51	13.83	13.32	49.95	03:53

Sample Type: Clean

From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/12 10:33

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.15	12.83	12.98	49.61	05:24
2	TC Clean	3.64	16.72	13.08	49.97	04:06
3	TC Clean	0.84	13.97	13.12	49.95	03:49
4	TC Clean	0.61	13.60	13.00	49.94	03:52

Sample Type: Blank (Creating v1460)

From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/10/12 10:55

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.31	12.67	12.98	49.57	05:14
2	TC Clean	3.92	16.88	12.97	49.96	04:04
3	TC Clean	1.24	14.30	13.07	49.93	03:46
4	TC Clean	0.78	13.78	13.00	49.92	03:48
5	Reagent Blank	5.22	18.01	12.78	49.94	05:10
6	Acid Blank	0.12	13.15	13.03	49.66	05:30

Sample Type: Sample

From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.4211 ppm	0.0000 ppm	0.0000%	2020/10/12 11:28

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4211	4.2108	12.20	25.13	12.93	50.04	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.1804 ppm (PASS)	0.0000 ppm	0%	2020/10/12 11:43

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.1804	251.8037	186.53	199.48	12.95	50.12	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/10/12 11:58

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.16	20.12	12.96	50.08	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/12 12:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.90	19.91	13.01	50.06	10:35

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.5208 ppm (PASS)	0.0000 ppm	0%	2020/10/12 12:27

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.5208	245.2077	181.90	194.77	12.87	50.03	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/12 12:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.94	21.96	13.03	50.19	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2009083-001	14.6285 ppm	0.9234 ppm	6.3100%	2020/10/12 12:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	13.9755	139.7552	107.29	120.25	12.96	50.10	10:29
2	TOC	15.2815	152.8146	116.45	129.25	12.80	50.08	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2008281-001	12.6532 ppm	0.3450 ppm	2.7300%	2020/10/12 13:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	12.8972	128.9723	99.72	112.86	13.14	50.02	10:28
2	TOC	12.4093	124.0926	96.30	109.44	13.14	50.14	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2008281-002	8.4080 ppm	0.8902 ppm	10.5900%	2020/10/12 13:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.7785	77.7850	63.82	76.81	13.00	50.09	10:29
2	TOC	9.0374	90.3740	72.65	85.70	13.05	50.10	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2008281-003	7.5067 ppm	0.0449 ppm	0.6000%	2020/10/12 14:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.4750	74.7500	61.69	74.66	12.97	50.11	10:31
2	TOC	7.5384	75.3844	62.13	75.01	12.88	50.06	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2008281-001*	11.8749 ppm	0.0428 ppm	0.3600%	2020/10/12 14:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	11.9052	119.0519	92.76	105.96	13.20	50.10	10:26
2	TOC	11.8446	118.4460	92.34	105.39	13.05	50.04	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2008281-002*	7.3557 ppm	0.0829 ppm	1.1300%	2020/10/12 15:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.4143	74.1427	61.26	74.09	12.83	50.09	10:25
2	TOC	7.2971	72.9709	60.44	73.40	12.96	50.06	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2008281-003*	7.2434 ppm	0.0120 ppm	0.1700%	2020/10/12 15:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.2519	72.5190	60.12	73.11	12.99	50.17	10:28
2	TOC	7.2349	72.3494	60.00	73.13	13.13	50.07	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.1502 ppm (PASS)	0.0000 ppm	0%	2020/10/12 16:13

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.1502	251.5015	186.32	199.27	12.96	50.17	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 5

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/10/12 16:27

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.46	20.48	13.02	50.06	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 5

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2009077-001	2.1277 ppm	0.0152 ppm	0.7200%	2020/10/12 16:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1384	21.3844	24.25	37.26	13.00	50.14	10:29
2	TOC	2.1169	21.1692	24.10	37.27	13.17	50.06	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2009077-001D	2.1547 ppm	0.0145 ppm	0.6700%	2020/10/12 17:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1650	21.6496	24.44	37.45	13.01	50.12	10:28

2	TOC	2.1444	21.4443	24.29	37.38	13.09	50.03	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2009077-001MS	27.8378 ppm	0.2217 ppm	0.8000%	2020/10/12 17:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.9945	279.9454	205.63	218.59	12.96	50.12	10:29
2	TOC	27.6811	276.8106	203.43	216.46	13.03	50.03	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2008395-001*	4.4751 ppm	0.0312 ppm	0.7000%	2020/10/12 18:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.4972	44.9716	40.80	53.92	13.12	49.96	10:27
2	TOC	4.4530	44.5297	40.49	53.34	12.85	50.06	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2008395-002*	4.5637 ppm	0.0631 ppm	1.3800%	2020/10/12 18:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.5191	45.1912	40.95	54.20	13.25	50.02	10:27
2	TOC	4.6084	46.0836	41.58	54.48	12.90	49.98	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 6

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2008395-003*	2.0281 ppm	0.0292 ppm	1.4400%	2020/10/12 19:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0488	20.4878	23.62	36.66	13.04	49.97	10:28
2	TOC	2.0074	20.0744	23.33	36.50	13.17	49.99	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC)	CAS_salt_010711	CAS_salt_010711

(v1460) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	16	TOC	K2008395-004*	1.8416 ppm	0.0130 ppm	0.7100%	2020/10/12 19:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8508	18.5077	22.23	35.26	13.02	50.00	10:29
2	TOC	1.8324	18.3238	22.10	35.31	13.21	50.02	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	17	TOC	K2008395-005*	1.8126 ppm	0.0177 ppm	0.9800%	2020/10/12 19:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8000	18.0002	21.88	34.90	13.03	50.01	10:27
2	TOC	1.8251	18.2511	22.05	35.12	13.06	50.04	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	18	TOC	K2008395-006*	1.8018 ppm	0.0487 ppm	2.7000%	2020/10/12 20:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8362	18.3623	22.13	35.08	12.95	50.08	10:26
2	TOC	1.7674	17.6737	21.65	34.76	13.11	50.07	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	19	TOC	K2008395-007*	1.7967 ppm	0.0046 ppm	0.2600%	2020/10/12 20:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8000	18.0002	21.88	34.66	12.78	50.07	10:24
2	TOC	1.7935	17.9346	21.83	34.93	13.10	50.10	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.9092 ppm (PASS)	0.0000 ppm	0%	2020/10/12 21:23

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.9092	249.0923	184.63	197.64	13.01	50.08	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/10/12 21:38

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.00	19.90	12.90	50.12	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/12 21:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.70	19.76	13.06	50.12	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.1627 ppm (PASS)	0.0000 ppm	0%	2020/10/12 22:07

	Base

Pos	Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.1627	241.6267	179.39	192.38	12.99	50.12	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/10/12 22:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	25.0 ppm	1	0.0000	0.0000	6.57	19.62	13.05	50.12	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2008395-009*	1.7295 ppm	0.0315 ppm	1.8200%	2020/10/12 22:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7517	17.5169	21.54	34.57	13.04	50.12	10:28
2	TOC	1.7072	17.0722	21.23	34.35	13.13	50.12	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2008395-010*	1.8031 ppm	0.0136 ppm	0.7500%	2020/10/12 23:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8127	18.1271	21.97	35.03	13.06	50.15	10:27
2	TOC	1.7935	17.9346	21.83	34.97	13.14	50.14	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2008395-001	4.3758 ppm	0.0033 ppm	0.0800%	2020/10/12 23:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3781	43.7813	39.96	53.16	13.20	50.15	10:29
2	TOC	4.3734	43.7343	39.93	53.13	13.20	50.14	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	24	TOC	K2008395-002	4.5737 ppm	0.0155 ppm	0.3400%	2020/10/13 00:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.5847	45.8469	41.41	54.75	13.34	50.14	10:31
2	TOC	4.5627	45.6274	41.26	54.52	13.26	50.15	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	25	TOC	K2008395-003	2.0647 ppm	0.0202 ppm	0.9800%	2020/10/13 00:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0790	20.7900	23.84	36.94	13.11	50.15	10:30
2	TOC	2.0505	20.5049	23.64	36.75	13.11	50.17	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	26	TOC	K2008395-004	1.9674 ppm	0.0117 ppm	0.5900%	2020/10/13 00:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9756	19.7565	23.11	36.13	13.02	50.15	10:28
2	TOC	1.9591	19.5911	22.99	36.10	13.11	50.18	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	27	TOC	K2008395-005	1.8273 ppm	0.0160 ppm	0.8800%	2020/10/13 01:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8160	18.1598	21.99	35.13	13.14	50.16	10:30
2	TOC	1.8387	18.3865	22.15	35.25	13.10	50.16	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC)	CAS_salt_010711	CAS_salt_010711

(v1460) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2008395-006	1.8190 ppm	0.0302 ppm	1.6600%	2020/10/13 01:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7976	17.9760	21.86	35.20	13.34	50.16	10:25
2	TOC	1.8404	18.4036	22.16	35.31	13.15	50.16	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.5901 ppm (PASS)	0.0000 ppm	0%	2020/10/13 02:21

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.5901	245.9005	182.39	195.55	13.16	50.17	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/10/13 02:36

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.61	19.76	13.15	50.16	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2008395-007	1.8434 ppm	0.0064 ppm	0.3400%	2020/10/13 02:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8389	18.3894	22.15	35.35	13.20	50.16	10:26
2	TOC	1.8479	18.4792	22.21	35.42	13.21	50.17	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2008395-008	1.8626 ppm	0.0552 ppm	2.9700%	2020/10/13 03:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8235	18.2354	22.04	35.35	13.31	50.17	10:28
2	TOC	1.9017	19.0166	22.59	35.79	13.20	50.18	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2008395-009	1.7793 ppm	0.0339 ppm	1.9000%	2020/10/13 03:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7554	17.5540	21.56	34.82	13.26	50.20	10:27
2	TOC	1.8033	18.0330	21.90	35.08	13.18	50.20	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	K2008395-010	1.8426 ppm	0.0893 ppm	4.8500%	2020/10/13 04:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.7795	17.7949	21.73	35.07	13.34	50.20	10:26
2	TOC	1.9058	19.0579	22.62	35.72	13.10	50.18	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	33	TOC	K2008568-001*	1.8461 ppm	0.0115 ppm	0.6200%	2020/10/13 04:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8542	18.5419	22.26	35.49	13.23	50.20	10:26
2	TOC	1.8379	18.3794	22.14	35.43	13.29	50.19	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC)	CAS_salt_010711	CAS_salt_010711

(v1460) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	34	TOC	K2008568-002*	1.6704 ppm	0.0186 ppm	1.1200%	2020/10/13 05:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6572	16.5718	20.88	34.04	13.17	50.16	10:30
2	TOC	1.6836	16.8355	21.06	34.09	13.03	50.18	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K2008568-007*	1.9203 ppm	0.0308 ppm	1.6100%	2020/10/13 05:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8985	18.9852	22.57	35.71	13.15	50.16	10:26
2	TOC	1.9421	19.4215	22.88	35.88	13.00	50.15	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	36	TOC	K2008568-007D*	1.8615 ppm	0.0242 ppm	1.3000%	2020/10/13 06:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.8444	18.4435	22.19	35.45	13.26	50.14	10:31
2	TOC	1.8786	18.7857	22.43	35.63	13.20	50.14	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	37	TOC	K2008568-007MS*	28.7886 ppm	0.2097 ppm	0.7300%	2020/10/13 06:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.6403	286.4031	210.16	223.46	13.30	50.12	10:29
2	TOC	28.9368	289.3683	212.24	225.40	13.16	50.14	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	38	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/13 07:03

Rep	Base	ppm	µg	Adjusted	NDIR (Abs)	Baseline	Pressure	Run

#	Analysis Type			(Abs)		(Abs)	(psig)	Time
1	TOC	0.0000	0.0000	7.26	20.46	13.21	50.11	10:29
2	TOC	0.0000	0.0000	7.36	20.62	13.26	50.11	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.7714 ppm (PASS)	0.0000 ppm	0%	2020/10/13 07:31

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.7714	247.7138	183.66	196.94	13.28	50.10	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/10/13 07:46

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.65	19.79	13.14	50.08	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/13 08:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.19	19.22	13.03	50.06	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2512 (IC) (v1460)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.1152 ppm (PASS)	0.0000 ppm	0%	2020/10/13 08:16

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.1152	241.1520	179.06	192.07	13.01	50.06	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Check Standard --> LCS From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.1189 ppm (PASS)	0.0000 ppm	0%	2020/10/13 08:30

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.1189	241.1891	179.08	192.02	12.94	50.06	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.0970 ppm (PASS)	0.0000 ppm	0%	2020/10/13 08:45

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.0970	250.9698	185.94	199.05	13.11	50.02	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 7

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time

◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/10/13 09:00

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.93	19.80	12.87	50.03	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1459	1.7137	0.0590	0.0000	0.0000	0.0000	2020/10/08 18:47	Fusion1 (Fusion1)
v1460	1.7417	0.1200	0.0000	0.0000	0.0000	2020/10/12 11:28	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v38	Calibration curve formula:	TOC: y = 7.015x + 9.892
Ver Creation:	2020/06/13 16:40	r^2 value:	TOC: r^2 = 0.99974
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25
50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version: v4 Operator: Fusion1 (Fusion1)
Ver Creation: 2019/02/21 17:57
Comment:

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/10/13 09:15

ALS Environmental

StarLIMS Run: 699032/699035

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-40-C 50 ppm LCS: 19-GEN-8-41-k 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-35-J

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-15-B 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-45-J

21 % H3PO4: 19-GEN-08-46-F

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: ME	Date Analyzed: 10-12-20
Reviewed By:	Date Reviewed: 10/13/20

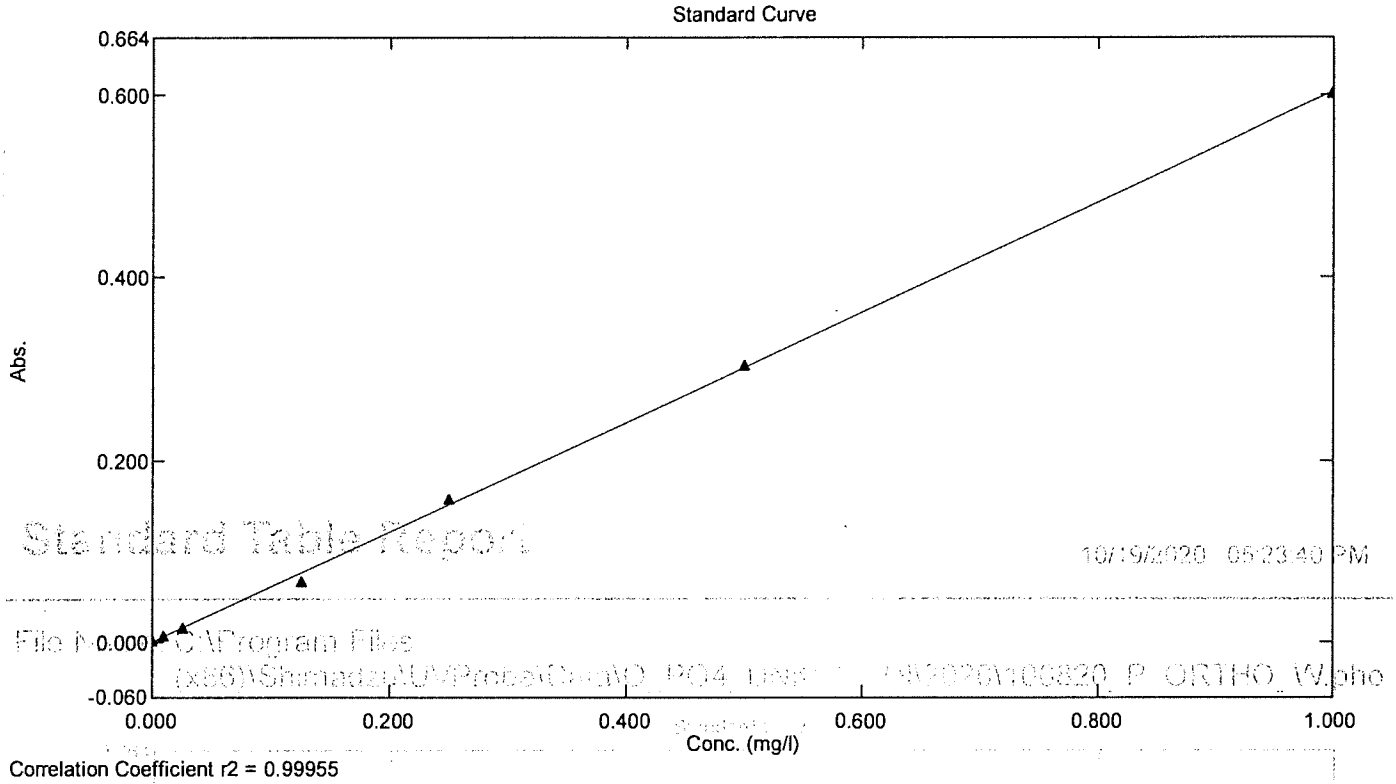
HS20100285 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20100285

Standard Table Report

10/19/2020 05:23:40 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\100820_P_ORTHO_W.pho



Correlation Coefficient r2 = 0.99955

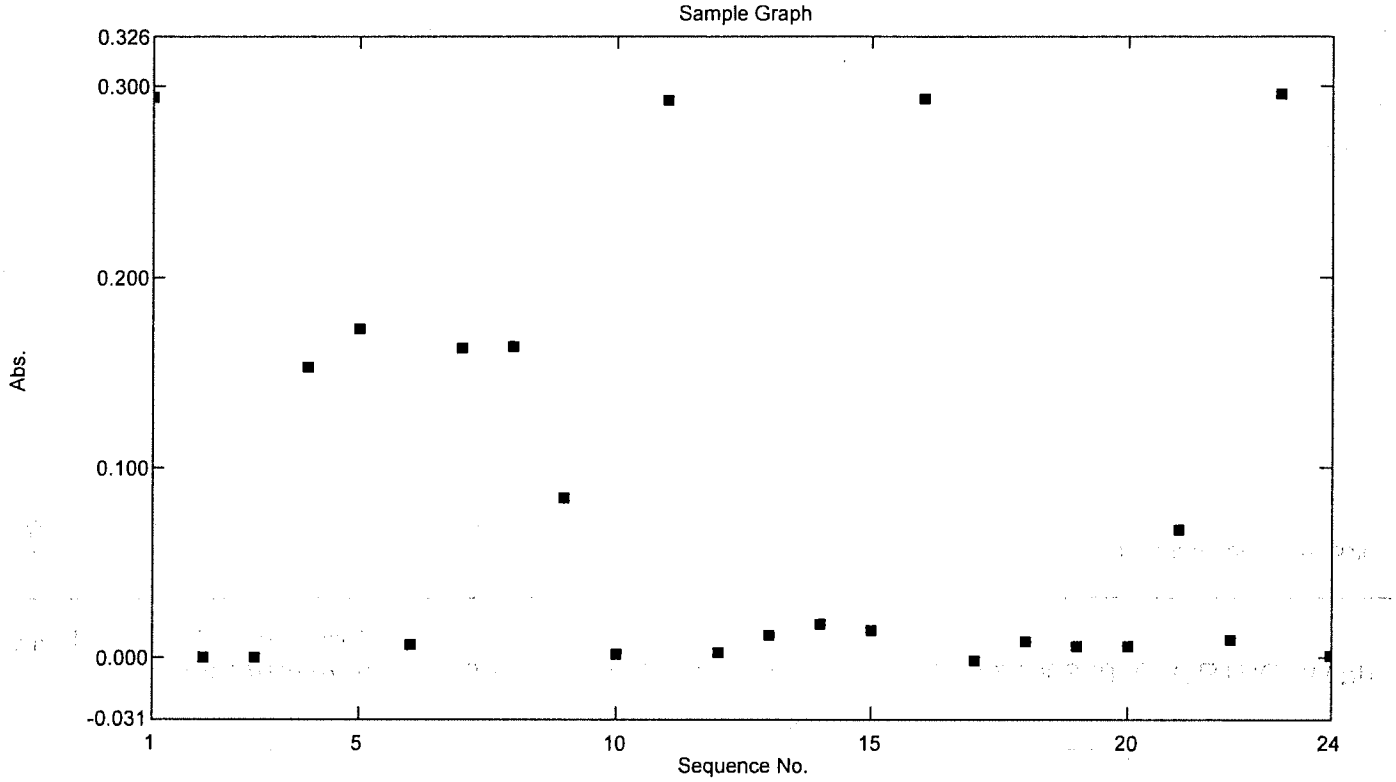
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	0.002	1.000	
2	STD2	Standard		0.010	0.007	1.000	
3	STD3	Standard		0.025	0.015	1.000	
4	STD4	Standard		0.125	0.066	1.000	
5	STD5	Standard		0.250	0.157	1.000	
6	STD6	Standard		0.500	0.305	1.000	
7	STD7	Standard		1.000	0.602	1.000	
8							

Sample Table Report

10/19/2020 05:23:45 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\100820_P_ORTHO_W.ph



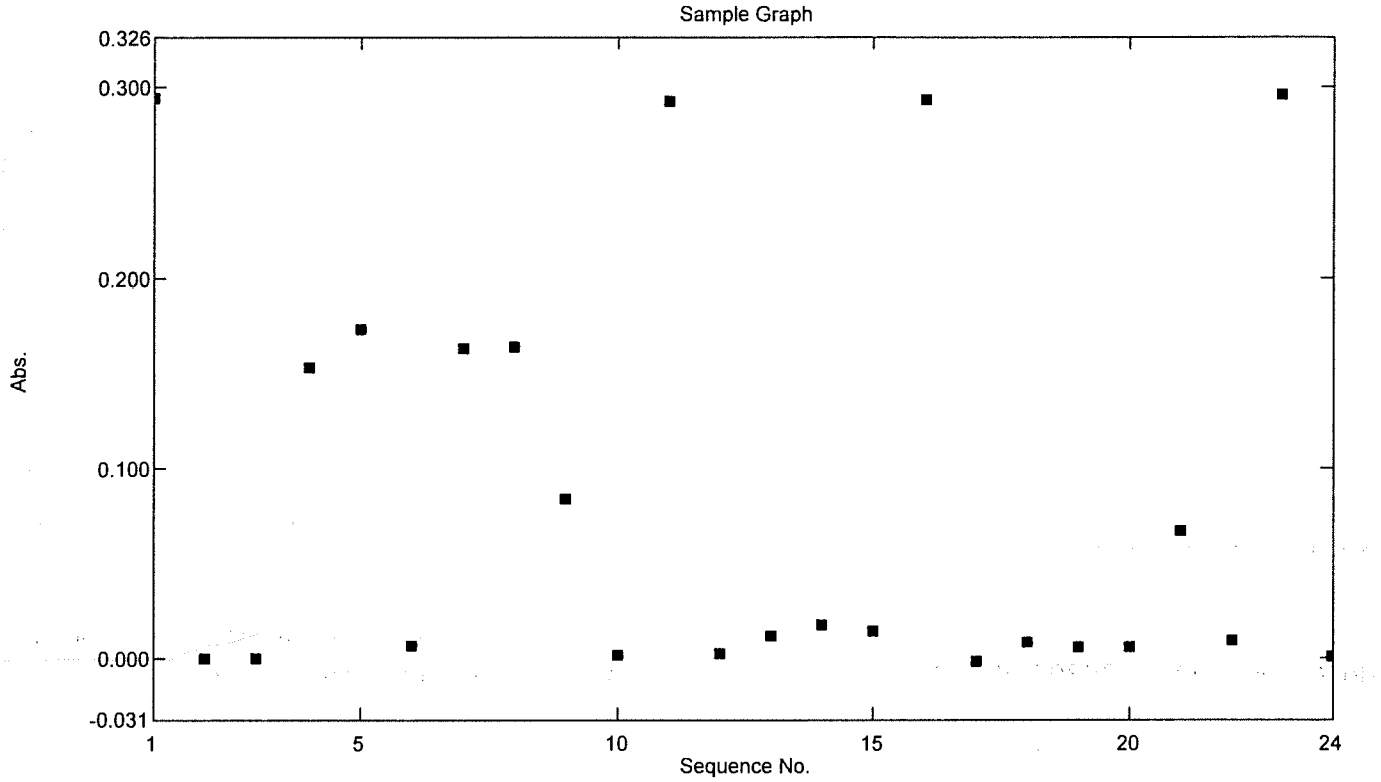
Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.487	0.294	314065605 WC-14
2	CCB	Unknown		0.001	0.001	
3	MBLK	Unknown		0.001	0.001	
4	LCS	Unknown		0.253	0.153	314065604 WC-14
5	HS20100285.01	Unknown		0.286	0.173	PF:10X,08:12AM
6	HS20100290.01	Unknown		0.011	0.007	08:13AM
7	HS20100290.01MS	Unknown		0.270	0.163	08:14AM
8	HS20100290.01MS	Unknown		0.271	0.163	08:14AM
9	HS20100290.02	Unknown		0.139	0.084	08:15AM
10	HS20100290.03	Unknown		0.004	0.002	08:15AM
11	CCV2	Unknown		0.484	0.293	
12	CCB2	Unknown		0.005	0.003	C-314066603 UV-11
13	HS20100338.01	Unknown		0.021	0.012	OUT OF
14	HS20100338.02	Unknown		0.030	0.018	11:31AM
15	HS20100338.03	Unknown		0.024	0.015	11:31AM
16	CCV3	Unknown		0.486	0.293	
17	CCB3	Unknown		-0.003	-0.002	
18	HS20100363.01	Unknown		0.014	0.009	04:26PM
19	HS20100363.02	Unknown		0.011	0.007	04:26PM

Sample Table Report

10/19/2020 05:23:45 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\100820_P_ORTHO_W.ph



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
20	HS20100363.03	Unknown		0.011	0.006	04:27PM
21	HS20100363.04	Unknown		0.111	0.067	04:27PM
22	HS20100363.05	Unknown		0.016	0.010	04:27PM
23	CCV4	Unknown		0.491	0.296	
24	CCB4	Unknown		0.002	0.001	
25						

HS20100285 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20100285

NH3 AMM - ISE_W 3593

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD				Date: 10/12/2020 4:35PM			
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F							
Probe Calibration Date: 10/12/2020		Cal Std ID:		Probe ID: X01-11506			
Std Level		mV	Conc., mg/L:	Sodium Thiosulfate ID: —			
STD 1 (mg/L):	0.2	140.6	0.200	Std Level	mV	Conc., mg/L:	
STD 2 (mg/L):	1	98.3	1.000	STD 4 (mg/L): 10	35.1	10.000	
STD 3 (mg/L):	5	55.6	5.001	STD 5 (mg/L): 50	-3.8	50.12	
LSC / MS Spike ID: 3100602320				ICAL Date & Slope: 101.0% / -58.0mV			
ICV Cal STD ID:							
DPD Reagent ID: 3100602305							

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/ –)	Comments
ICV		50ml	50ml		10.242			
CCB					0.009			
MBLK					0.008			
LCS					10.574			
MS20100285-01					10.716		-VE	
↓ 285-01MS					20.332			
↓ 285-01MSD					20.416			
CCV					10.380			
CCB					0.007			

Batch ID:	Reported By	Reviewed By:
370327	MD	RG 10/12/20

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WorkOrder: HS20100334

Longhorn GW Treatment Plant Bi Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

07-Nov-2020

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  - Trip Blank
  - Dates Report
  - QC
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  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
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- HS20100334 8260_W_DOD Raw Data
- HS20100334 Wet Chem Raw Data (9056_anions_W)

HS20100334 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20100334

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October 21, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20100334**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Oct 07, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20100334

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20100334-01	LH18/24-SP650_100620	Water		06-Oct-2020 14:00	07-Oct-2020 09:20	☐
HS20100334-02	Trip Blank	Water		06-Oct-2020 00:00	07-Oct-2020 09:20	☐

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20100334

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R370141

Sample ID: CCV

- Acetone exceeded %D limits for CCV. Samples are ND for this compound.

Sample ID: HS20100283-03MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SW9056

Batch ID: R371006

Sample ID: LH18/24-SP650_100620 (HS20100334-01MS)

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Chloride)

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: LH18/24-SP650_100620
Collection Date: 06-Oct-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20100334
Lab ID:HS20100334-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 20:11
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 20:11
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Oct-2020 20:11
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Oct-2020 20:11
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 20:11
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Oct-2020 20:11
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Oct-2020 20:11
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	08-Oct-2020 20:11
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20100334
Sample ID: LH18/24-SP650_100620 Lab ID:HS20100334-01
Collection Date: 06-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
cis-1,2-Dichloroethene	**16**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Oct-2020 20:11
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Oct-2020 20:11
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Oct-2020 20:11
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 20:11
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 20:11
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 20:11
Trichloroethene	**2.8**		**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Oct-2020 20:11
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 20:11
Vinyl chloride	**0.46**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	08-Oct-2020 20:11
Surr: 1,2-Dichloroethane-d4	*92.2*			**0**	*81-118*	*%REC*	*1*	*08-Oct-2020 20:11*
Surr: 4-Bromofluorobenzene	*108*			**0**	*85-114*	*%REC*	*1*	*08-Oct-2020 20:11*
Surr: Dibromofluoromethane	*93.6*			**0**	*80-119*	*%REC*	*1*	*08-Oct-2020 20:11*
Surr: Toluene-d8	*98.0*			**0**	*89-112*	*%REC*	*1*	*08-Oct-2020 20:11*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**583**		**10.0**	**25.0**	**25.0**	**mg/L**	50	21-Oct-2020 15:56
Sulfate	**33.8**		**0.200**	**0.500**	**0.500**	**mg/L**	1	21-Oct-2020 15:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20100334
Sample ID: Trip Blank
Lab ID:HS20100334-02
Collection Date: 06-Oct-2020 00:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 19:47
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	08-Oct-2020 19:47
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	08-Oct-2020 19:47
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 19:47
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	08-Oct-2020 19:47
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	08-Oct-2020 19:47
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 19:47
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 19:47
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 19:47
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	08-Oct-2020 19:47
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	08-Oct-2020 19:47
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20100334
Sample ID: Trip Blank
Lab ID:HS20100334-02
Collection Date: 06-Oct-2020 00:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	08-Oct-2020 19:47
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	08-Oct-2020 19:47
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	08-Oct-2020 19:47
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	08-Oct-2020 19:47
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	08-Oct-2020 19:47
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	08-Oct-2020 19:47
Surr: 1,2-Dichloroethane-d4	*93.1*			**0**	*81-118*	*%REC*	*1*	*08-Oct-2020 19:47*
Surr: 4-Bromofluorobenzene	*105*			**0**	*85-114*	*%REC*	*1*	*08-Oct-2020 19:47*
Surr: Dibromofluoromethane	*95.2*			**0**	*80-119*	*%REC*	*1*	*08-Oct-2020 19:47*
Surr: Toluene-d8	*100*			**0**	*89-112*	*%REC*	*1*	*08-Oct-2020 19:47*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R370141 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20100334-01	LH18/24-SP650_100620	06 Oct 2020 14:00			08 Oct 2020 20:11	1
HS20100334-02	Trip Blank	06 Oct 2020 00:00			08 Oct 2020 19:47	1
Batch ID: R371006 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20100334-01	LH18/24-SP650_100620	06 Oct 2020 14:00			21 Oct 2020 15:56	50
HS20100334-01	LH18/24-SP650_100620	06 Oct 2020 14:00			21 Oct 2020 15:02	1

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R370141 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200108** Units: **UG/L** Analysis Date: **08-Oct-2020 13:22**
Client ID: Run ID: **VOA6_370141** SeqNo: **5772406** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R370141 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200108** Units: **UG/L** Analysis Date: **08-Oct-2020 13:22**
Client ID: Run ID: **VOA6_370141** SeqNo: **5772406** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.45*	*1.0*	*50*	*0*	*90.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53.43*	*1.0*	*50*	*0*	*107*	*85 - 114*				
Surr: Dibromofluoromethane	*46.76*	*1.0*	*50*	*0*	*93.5*	*80 - 119*				
Surr: Toluene-d8	*49.28*	*1.0*	*50*	*0*	*98.6*	*89 - 112*				

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R370141 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200108** Units: **UG/L** Analysis Date: **08-Oct-2020 12:34**
Client ID: Run ID: **VOA6_370141** SeqNo: **5772405** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.48	1.0	20	0	97.4	78 - 124				
1,1,1-Trichloroethane	19.7	1.0	20	0	98.5	74 - 131				
1,1,2,2-Tetrachloroethane	18.95	1.0	20	0	94.7	71 - 121				
1,1,2-Trichloroethane	19.56	1.0	20	0	97.8	80 - 119				
1,1-Dichloroethane	19.37	1.0	20	0	96.9	77 - 125				
1,1-Dichloroethene	20.03	1.0	20	0	100	71 - 131				
1,1-Dichloropropene	19.82	1.0	20	0	99.1	78 - 125				
1,2,3-Trichlorobenzene	21.52	1.0	20	0	108	69 - 129				
1,2,3-Trichloropropane	19.48	1.0	20	0	97.4	73 - 122				
1,2,4-Trichlorobenzene	22.01	1.0	20	0	110	69 - 130				
1,2,4-Trimethylbenzene	19.55	1.0	20	0	97.8	76 - 124				
1,2-Dibromo-3-chloropropane	18.73	1.0	20	0	93.6	62 - 128				
1,2-Dibromoethane	19.64	1.0	20	0	98.2	77 - 121				
1,2-Dichlorobenzene	19.2	1.0	20	0	96.0	80 - 119				
1,2-Dichloroethane	19.53	1.0	20	0	97.6	73 - 128				
1,2-Dichloropropane	19.92	1.0	20	0	99.6	78 - 122				
1,3,5-Trimethylbenzene	19.48	1.0	20	0	97.4	75 - 124				
1,3-Dichlorobenzene	19.44	1.0	20	0	97.2	80 - 119				
1,3-Dichloropropane	19.29	1.0	20	0	96.5	80 - 119				
1,4-Dichlorobenzene	19.07	1.0	20	0	95.4	79 - 118				
2,2-Dichloropropane	20.23	1.0	20	0	101	60 - 139				
2-Butanone	44.85	2.0	40	0	112	56 - 143				
2-Chlorotoluene	19.14	1.0	20	0	95.7	79 - 122				
2-Hexanone	41.6	2.0	40	0	104	57 - 139				
4-Chlorotoluene	18.98	1.0	20	0	94.9	78 - 122				
4-Isopropyltoluene	19.64	1.0	20	0	98.2	77 - 127				
4-Methyl-2-pentanone	39.48	2.0	40	0	98.7	67 - 130				
Acetone	51.65	2.0	40	0	129	39 - 160				
Benzene	19.41	1.0	20	0	97.0	79 - 120				
Bromobenzene	19.39	1.0	20	0	97.0	80 - 120				
Bromochloromethane	18.83	1.0	20	0	94.1	78 - 123				
Bromodichloromethane	19.14	1.0	20	0	95.7	79 - 125				
Bromoform	19.71	1.0	20	0	98.6	66 - 130				
Bromomethane	21.58	1.0	20	0	108	53 - 141				

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R370141 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200108** Units: **UG/L** Analysis Date: **08-Oct-2020 12:34**
Client ID: Run ID: **VOA6_370141** SeqNo: **5772405** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	39.66	2.0	40	0	99.2	64 - 133				
Carbon tetrachloride	19.44	1.0	20	0	97.2	72 - 136				
Chlorobenzene	19.25	1.0	20	0	96.3	82 - 118				
Chloroethane	19.99	1.0	20	0	99.9	60 - 138				
Chloroform	19.59	1.0	20	0	98.0	79 - 124				
Chloromethane	18.62	1.0	20	0	93.1	50 - 139				
cis-1,2-Dichloroethene	19.53	1.0	20	0	97.7	78 - 123				
cis-1,3-Dichloropropene	19.62	1.0	20	0	98.1	75 - 124				
Dibromochloromethane	19.57	1.0	20	0	97.8	74 - 126				
Dibromomethane	19.68	1.0	20	0	98.4	79 - 123				
Dichlorodifluoromethane	17.42	1.0	20	0	87.1	32 - 152				
Ethylbenzene	19.61	1.0	20	0	98.1	79 - 121				
Hexachlorobutadiene	23.23	1.0	20	0	116	66 - 134				
Isopropylbenzene	19.6	1.0	20	0	98.0	72 - 131				
m,p-Xylene	39.31	2.0	40	0	98.3	80 - 121				
Methylene chloride	20.62	2.0	20	0	103	74 - 124				
Naphthalene	20.63	1.0	20	0	103	61 - 128				
n-Butylbenzene	20.33	1.0	20	0	102	75 - 128				
n-Propylbenzene	19.5	1.0	20	0	97.5	76 - 126				
o-Xylene	19.54	1.0	20	0	97.7	78 - 122				
sec-Butylbenzene	19.41	1.0	20	0	97.1	77 - 126				
Styrene	19.41	1.0	20	0	97.1	78 - 123				
tert-Butylbenzene	19.5	1.0	20	0	97.5	78 - 124				
Tetrachloroethene	19.59	1.0	20	0	98.0	74 - 129				
Toluene	19.56	1.0	20	0	97.8	80 - 121				
trans-1,2-Dichloroethene	19.73	1.0	20	0	98.6	75 - 124				
trans-1,3-Dichloropropene	19.94	1.0	20	0	99.7	73 - 127				
Trichloroethene	19.52	1.0	20	0	97.6	79 - 123				
Trichlorofluoromethane	20.55	1.0	20	0	103	65 - 141				
Vinyl chloride	19.52	1.0	20	0	97.6	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.31*	*1.0*	*50*	*0*	*96.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.07*	*1.0*	*50*	*0*	*102*	*85 - 114*				
Surr: Dibromofluoromethane	*47.4*	*1.0*	*50*	*0*	*94.8*	*80 - 119*				
Surr: Toluene-d8	*47.9*	*1.0*	*50*	*0*	*95.8*	*89 - 112*				

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R370141 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20100283-03MS** Units: **UG/L** Analysis Date: **08-Oct-2020 18:11**
Client ID: Run ID: **VOA6_370141** SeqNo: **5772418** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	23	1.0	20	0	115	78 - 124				
1,1,1-Trichloroethane	24.93	1.0	20	0	125	74 - 131				
1,1,2,2-Tetrachloroethane	22.55	1.0	20	0	113	71 - 121				
1,1,2-Trichloroethane	23.06	1.0	20	0	115	80 - 119				
1,1-Dichloroethane	23.36	1.0	20	0	117	77 - 125				
1,1-Dichloroethene	25.88	1.0	20	0	129	71 - 131				
1,1-Dichloropropene	24.43	1.0	20	0	122	78 - 125				
1,2,3-Trichlorobenzene	20.6	1.0	20	0	103	69 - 129				
1,2,3-Trichloropropane	23.21	1.0	20	0	116	73 - 122				
1,2,4-Trichlorobenzene	21.41	1.0	20	0	107	69 - 130				
1,2,4-Trimethylbenzene	22.65	1.0	20	0	113	76 - 124				
1,2-Dibromo-3-chloropropane	22.27	1.0	20	0	111	62 - 128				
1,2-Dibromoethane	22.83	1.0	20	0	114	77 - 121				
1,2-Dichlorobenzene	21.88	1.0	20	0	109	80 - 119				
1,2-Dichloroethane	23.07	1.0	20	0	115	73 - 128				
1,2-Dichloropropane	23.64	1.0	20	0	118	78 - 122				
1,3,5-Trimethylbenzene	23.08	1.0	20	0	115	75 - 124				
1,3-Dichlorobenzene	22	1.0	20	0	110	80 - 119				
1,3-Dichloropropane	22.59	1.0	20	0	113	80 - 119				
1,4-Dichlorobenzene	21.92	1.0	20	0	110	79 - 118				
2,2-Dichloropropane	24.35	1.0	20	0	122	60 - 139				
2-Butanone	57.3	2.0	40	0	143	56 - 143				S
2-Chlorotoluene	22.25	1.0	20	0	111	79 - 122				
2-Hexanone	53.19	2.0	40	0	133	57 - 139				
4-Chlorotoluene	22.15	1.0	20	0	111	78 - 122				
4-Isopropyltoluene	23.36	1.0	20	0	117	77 - 127				
4-Methyl-2-pentanone	49.55	2.0	40	0	124	67 - 130				
Acetone	70.03	2.0	40	0	175	39 - 160				S
Benzene	23.64	1.0	20	0	118	79 - 120				
Bromobenzene	22.41	1.0	20	0	112	80 - 120				
Bromochloromethane	22.88	1.0	20	0	114	78 - 123				
Bromodichloromethane	22.86	1.0	20	0	114	79 - 125				
Bromoform	23.14	1.0	20	0	116	66 - 130				
Bromomethane	25.11	1.0	20	0	126	53 - 141				

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R370141 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20100283-03MS** Units: **UG/L** Analysis Date: **08-Oct-2020 18:11**
Client ID: Run ID: **VOA6_370141** SeqNo: **5772418** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	46.93	2.0	40	0	117	64 - 133				
Carbon tetrachloride	24.54	1.0	20	0	123	72 - 136				
Chlorobenzene	22.42	1.0	20	0	112	82 - 118				
Chloroethane	23.81	1.0	20	0	119	60 - 138				
Chloroform	23.81	1.0	20	0	119	79 - 124				
Chloromethane	20.35	1.0	20	0	102	50 - 139				
cis-1,2-Dichloroethene	23.83	1.0	20	0	119	78 - 123				
cis-1,3-Dichloropropene	22.81	1.0	20	0	114	75 - 124				
Dibromochloromethane	22.26	1.0	20	0	111	74 - 126				
Dibromomethane	22.83	1.0	20	0	114	79 - 123				
Dichlorodifluoromethane	16.49	1.0	20	0	82.4	32 - 152				
Ethylbenzene	23.36	1.0	20	0	117	79 - 121				
Hexachlorobutadiene	22.24	1.0	20	0	111	66 - 134				
Isopropylbenzene	24	1.0	20	0	120	72 - 131				
m,p-Xylene	46.81	2.0	40	0	117	80 - 121				
Methylene chloride	25.14	2.0	20	0	126	74 - 124				S
Naphthalene	20.51	1.0	20	0	103	61 - 128				
n-Butylbenzene	23.16	1.0	20	0	116	75 - 128				
n-Propylbenzene	23.45	1.0	20	0	117	76 - 126				
o-Xylene	23.08	1.0	20	0	115	78 - 122				
sec-Butylbenzene	23.39	1.0	20	0	117	77 - 126				
Styrene	22.66	1.0	20	0	113	78 - 123				
tert-Butylbenzene	23.33	1.0	20	0	117	78 - 124				
Tetrachloroethene	23.99	1.0	20	0	120	74 - 129				
Toluene	23.35	1.0	20	0	117	80 - 121				
trans-1,2-Dichloroethene	24.57	1.0	20	0	123	75 - 124				
trans-1,3-Dichloropropene	23.28	1.0	20	0	116	73 - 127				
Trichloroethene	24.07	1.0	20	0	120	79 - 123				
Trichlorofluoromethane	26.1	1.0	20	0	130	65 - 141				
Vinyl chloride	23.53	1.0	20	0	118	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.99*	*1.0*	*50*	*0*	*92.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.78*	*1.0*	*50*	*0*	*106*	*85 - 114*				
Surr: Dibromofluoromethane	*47.78*	*1.0*	*50*	*0*	*95.6*	*80 - 119*				
Surr: Toluene-d8	*48.23*	*1.0*	*50*	*0*	*96.5*	*89 - 112*				

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R370141 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20100283-03MSD** Units: **UG/L** Analysis Date: **08-Oct-2020 18:35**
Client ID: Run ID: **VOA6_370141** SeqNo: **5772419** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	22.21	1.0	20	0	111	78 - 124	23	3.52	20	
1,1,1-Trichloroethane	23.68	1.0	20	0	118	74 - 131	24.93	5.15	20	
1,1,2,2-Tetrachloroethane	22.1	1.0	20	0	111	71 - 121	22.55	2	20	
1,1,2-Trichloroethane	22.23	1.0	20	0	111	80 - 119	23.06	3.66	20	
1,1-Dichloroethane	22.74	1.0	20	0	114	77 - 125	23.36	2.72	20	
1,1-Dichloroethene	24.17	1.0	20	0	121	71 - 131	25.88	6.84	20	
1,1-Dichloropropene	23.32	1.0	20	0	117	78 - 125	24.43	4.65	20	
1,2,3-Trichlorobenzene	23.58	1.0	20	0	118	69 - 129	20.6	13.5	20	
1,2,3-Trichloropropane	22.85	1.0	20	0	114	73 - 122	23.21	1.59	20	
1,2,4-Trichlorobenzene	24.06	1.0	20	0	120	69 - 130	21.41	11.7	20	
1,2,4-Trimethylbenzene	22.16	1.0	20	0	111	76 - 124	22.65	2.18	20	
1,2-Dibromo-3-chloropropane	23.49	1.0	20	0	117	62 - 128	22.27	5.31	20	
1,2-Dibromoethane	22.75	1.0	20	0	114	77 - 121	22.83	0.361	20	
1,2-Dichlorobenzene	21.58	1.0	20	0	108	80 - 119	21.88	1.35	20	
1,2-Dichloroethane	22.31	1.0	20	0	112	73 - 128	23.07	3.37	20	
1,2-Dichloropropane	22.89	1.0	20	0	114	78 - 122	23.64	3.22	20	
1,3,5-Trimethylbenzene	22.29	1.0	20	0	111	75 - 124	23.08	3.52	20	
1,3-Dichlorobenzene	21.48	1.0	20	0	107	80 - 119	22	2.41	20	
1,3-Dichloropropane	22.31	1.0	20	0	112	80 - 119	22.59	1.21	20	
1,4-Dichlorobenzene	21.49	1.0	20	0	107	79 - 118	21.92	1.99	20	
2,2-Dichloropropane	22.93	1.0	20	0	115	60 - 139	24.35	5.99	20	
2-Butanone	58.05	2.0	40	0	145	56 - 143	57.3	1.29	20	S
2-Chlorotoluene	21.55	1.0	20	0	108	79 - 122	22.25	3.23	20	
2-Hexanone	53.94	2.0	40	0	135	57 - 139	53.19	1.41	20	
4-Chlorotoluene	21.29	1.0	20	0	106	78 - 122	22.15	3.99	20	
4-Isopropyltoluene	22.55	1.0	20	0	113	77 - 127	23.36	3.55	20	
4-Methyl-2-pentanone	49.22	2.0	40	0	123	67 - 130	49.55	0.673	20	
Acetone	72.75	2.0	40	0	182	39 - 160	70.03	3.82	20	S
Benzene	22.86	1.0	20	0	114	79 - 120	23.64	3.34	20	
Bromobenzene	21.48	1.0	20	0	107	80 - 120	22.41	4.24	20	
Bromochloromethane	22.48	1.0	20	0	112	78 - 123	22.88	1.79	20	
Bromodichloromethane	22.51	1.0	20	0	113	79 - 125	22.86	1.53	20	
Bromoform	23.01	1.0	20	0	115	66 - 130	23.14	0.562	20	
Bromomethane	23.15	1.0	20	0	116	53 - 141	25.11	8.1	20	

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R370141 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20100283-03MSD** Units: **UG/L** Analysis Date: **08-Oct-2020 18:35**
Client ID: Run ID: **VOA6_370141** SeqNo: **5772419** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	44.35	2.0	40	0	111	64 - 133	46.93	5.66	20	
Carbon tetrachloride	23.34	1.0	20	0	117	72 - 136	24.54	5	20	
Chlorobenzene	21.63	1.0	20	0	108	82 - 118	22.42	3.62	20	
Chloroethane	22.84	1.0	20	0	114	60 - 138	23.81	4.14	20	
Chloroform	22.91	1.0	20	0	115	79 - 124	23.81	3.86	20	
Chloromethane	19.36	1.0	20	0	96.8	50 - 139	20.35	4.98	20	
cis-1,2-Dichloroethene	23.29	1.0	20	0	116	78 - 123	23.83	2.29	20	
cis-1,3-Dichloropropene	22.36	1.0	20	0	112	75 - 124	22.81	2.02	20	
Dibromochloromethane	22.01	1.0	20	0	110	74 - 126	22.26	1.13	20	
Dibromomethane	22.86	1.0	20	0	114	79 - 123	22.83	0.106	20	
Dichlorodifluoromethane	15.81	1.0	20	0	79.1	32 - 152	16.49	4.19	20	
Ethylbenzene	22.74	1.0	20	0	114	79 - 121	23.36	2.69	20	
Hexachlorobutadiene	23.32	1.0	20	0	117	66 - 134	22.24	4.74	20	
Isopropylbenzene	23.01	1.0	20	0	115	72 - 131	24	4.24	20	
m,p-Xylene	44.82	2.0	40	0	112	80 - 121	46.81	4.34	20	
Methylene chloride	24.1	2.0	20	0	120	74 - 124	25.14	4.22	20	
Naphthalene	24.88	1.0	20	0	124	61 - 128	20.51	19.3	20	
n-Butylbenzene	22.88	1.0	20	0	114	75 - 128	23.16	1.25	20	
n-Propylbenzene	22.57	1.0	20	0	113	76 - 126	23.45	3.86	20	
o-Xylene	22.56	1.0	20	0	113	78 - 122	23.08	2.27	20	
sec-Butylbenzene	22.77	1.0	20	0	114	77 - 126	23.39	2.68	20	
Styrene	22.2	1.0	20	0	111	78 - 123	22.66	2.05	20	
tert-Butylbenzene	22.55	1.0	20	0	113	78 - 124	23.33	3.4	20	
Tetrachloroethene	23.46	1.0	20	0	117	74 - 129	23.99	2.24	20	
Toluene	22.21	1.0	20	0	111	80 - 121	23.35	5.02	20	
trans-1,2-Dichloroethene	23.43	1.0	20	0	117	75 - 124	24.57	4.78	20	
trans-1,3-Dichloropropene	23.02	1.0	20	0	115	73 - 127	23.28	1.12	20	
Trichloroethene	23.55	1.0	20	0	118	79 - 123	24.07	2.16	20	
Trichlorofluoromethane	24.54	1.0	20	0	123	65 - 141	26.1	6.16	20	
Vinyl chloride	21.67	1.0	20	0	108	58 - 137	23.53	8.23	20	
Surr: 1,2-Dichloroethane-d4	*46.36*	*1.0*	*50*	*0*	*92.7*	*81 - 118*	*45.99*	*0.785*	*20*	
Surr: 4-Bromofluorobenzene	*52.77*	*1.0*	*50*	*0*	*106*	*85 - 114*	*52.78*	*0.0282*	*20*	
Surr: Dibromofluoromethane	*47.96*	*1.0*	*50*	*0*	*95.9*	*80 - 119*	*47.78*	*0.384*	*20*	
Surr: Toluene-d8	*48.02*	*1.0*	*50*	*0*	*96.0*	*89 - 112*	*48.23*	*0.434*	*20*	

ALS Houston, US Date: 21-Oct-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20100334

QC BATCH REPORT

Batch ID:	**R370141 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20100334-01 HS20100334-02

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20100334

QC BATCH REPORT

Batch ID: R371006 (0) **Instrument:** ICS2100 **Method:** ANIONS BY SW9056A

MBLK Sample ID: **MBLK-102120** Units: **mg/L** Analysis Date: **21-Oct-2020 13:50**
Client ID: Run ID: **ICS2100_371006** SeqNo: **5793246** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-102120** Units: **mg/L** Analysis Date: **21-Oct-2020 14:08**
Client ID: Run ID: **ICS2100_371006** SeqNo: **5793247** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.28	0.500	20	0	96.4	80 - 120				
Sulfate	19.33	0.500	20	0	96.7	80 - 120				

MS Sample ID: **HS20100334-01MS** Units: **mg/L** Analysis Date: **21-Oct-2020 15:20**
Client ID: **LH18/24-SP650_100620** Run ID: **ICS2100_371006** SeqNo: **5793249** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	566.9	0.500	10	564	28.9	80 - 120				SEO
Sulfate	43.65	0.500	10	33.82	98.3	80 - 120				

MSD Sample ID: **HS20100334-01MSD** Units: **mg/L** Analysis Date: **21-Oct-2020 15:38**
Client ID: **LH18/24-SP650_100620** Run ID: **ICS2100_371006** SeqNo: **5793250** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	574.9	0.500	10	564	109	80 - 120	566.9	1.4	20	EO
Sulfate	44.35	0.500	10	33.82	105	80 - 120	43.65	1.58	20	

The following samples were analyzed in this batch: HS20100334-01

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20100334**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 21-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20100334

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20100334-01	LH18/24-SP650_100620	Login	10/8/2020 11:05:20 AM	NDR	WET378
HS20100334-01	LH18/24-SP650_100620	Login	10/8/2020 11:05:20 AM	NDR	VOA120
HS20100334-02	Trip Blank	Login	10/8/2020 11:05:20 AM	NDR	VOA120

ALS Houston, US Date: 21-Oct-20

Sample Receipt Checklist

Work Order ID: HS20100334 **Date/Time Received:** 07-Oct-2020 09:20

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Nilesh D. Ranchod	08-Oct-2020 08:32	**Reviewed by:**	/S/ RJ Modashia	08-Oct-2020 13:48
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	2 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.8°C UC/C	IR31
Cooler(s)/Kit(s):	44785	
Date/Time sample(s) sent to storage:	10/07/2020 18:00	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT
BI-WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O Number

HS20100334
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_100620	Water	10/06/20 / 14:00		3	3		HCL	
LH18/24-SP650_100620	Water	10/06/20 / 14:00		1		1	NONE	
Trip Blank	Water	10/06/20		2	2		HCL	

Additional Remarks: **Standard TAT on other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	10/06/20	14:30									

9For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Lucero	10/7/20	09:20							

Remarks
Cooler - 44785 Temp 0.8°C IR31 CFO

(Word) S:\Ltr-ces\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

44785

CUSTODY SEAL

Date: 10/6/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By: SM
Date: 10/07/20

44785

Must Deliver Next Business Day
Time and Tempature Sensitive!

44785

ORIGIN ID:SGRA (903) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
MB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 06SEP20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFE3211
DIMS: 19x18x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: ADDITIONAL BOTTLES - BO 73689 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1522

WED - 07 OCT 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

HS20100334 8260_W_DOD Raw Data

ALS WO# HS20100334

MSVOA06 -Logbook

Batch: 41874 **Analyst:** Presenta Cabascango

Date: 09-24-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	09-24-2020 11:10 am	1.00	50 mL	50 mL	X092401.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	09-24-2020 11:34 am	1.00	50 mL	50 mL	X092402.D	Liquid	Y	NA
	0.10 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	09-24-2020 11:58 am	1.00	50 mL	50 mL	X092403.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	09-24-2020 12:46 pm	1.00	50 mL	50 mL	X092404.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	09-24-2020 01:10 pm	1.00	50 mL	50 mL	X092405.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	09-24-2020 01:33 pm	1.00	50 mL	50 mL	X092406.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	09-24-2020 01:57 pm	1.00	50 mL	50 mL	X092407.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	09-24-2020 02:21 pm	1.00	50 mL	50 mL	X092408.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	09-24-2020 02:45 pm	1.00	50 mL	50 mL	X092409.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	09-24-2020 03:09 pm	1.00	50 mL	50 mL	X092410.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	09-24-2020 03:33 pm	1.00	50 mL	50 mL	X092411.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	09-24-2020 03:57 pm	1.00	50 mL	50 mL	X092412.D	Liquid	Y	NA
13	BLANK	SAMP	09-24-2020 04:21 pm	1.00	50 mL	50 mL	X092413.D	Liquid	Y	NA
14	VSTD050	ICV	09-24-2020 04:45 pm	1.00	50 mL	50 mL	X092414.D	Liquid	Y	NA
	10 uL ical std/50 mL DI									
15	CCB	SAMP	09-24-2020 05:09 pm	1.00	50 mL	50 mL	X092415.D	Liquid	Y	NA
16	VLCSW-200924	LCS	09-24-2020 05:33 pm	1.00	50 mL	50 mL	X092416.D	Liquid	Y	na
	4.0 uL cal std/50 mL DI									
17	BLK	SAMP	09-24-2020 05:57 pm	1.00	50 mL	50 mL	X092417.D	Liquid	Y	na
18	BLK	SAMP	09-24-2020 06:21 pm	1.00	50 mL	50 mL	X092418.D	Liquid	Y	na
19	VBLKW-200924	MBLK	09-24-2020 06:45 pm	1.00	50 mL	50 mL	X092419.D	Liquid	Y	na
20	HS20090748-03	SAMP	09-24-2020 07:09 pm	1.00	50 mL	50 mL	X092420.D	Liquid	Y	<2
21	HS20091030-02	SAMP	09-24-2020 07:33 pm	1.00	50 mL	50 mL	X092421.D	Liquid	Y	<2
22	HS20090748-01	SAMP	09-24-2020 07:58 pm	1.00	50 mL	50 mL	X092422.D	Liquid	Y	<2
23	HS20091030-01	SAMP	09-24-2020 08:22 pm	1.00	50 mL	50 mL	X092423.D	Liquid	Y	<2
24	HS20090796-01	SAMP	09-24-2020 08:46 pm	1.00	50 mL	50 mL	X092424.D	Liquid	Y	<2
25	HS20090748-01MS	MS	09-24-2020 09:10 pm	1.00	50 mL	50 mL	X092425.D	Liquid	Y	<2
	3.5 uL cal std/40 mL amp									
26	HS20090748-01MSD	MSD	09-24-2020 09:34 pm	1.00	50 mL	50 mL	X092426.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
27	CCV-END	CCV	09-24-2020 09:58 pm	1.00	50 mL	50 mL	X092427.D	Liquid	Y	na
	10 uL cal std/50 mL DI									

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-47-06
IS ID	31106-47-06
CAL STD ID	31106-48-01/02
BFB ID	31106-47-06
pH Paper	634-64-10

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	46.28	92	80-120
trans-1,3-Dichloroprope	50.00	46.89	94	80-120
1,3-Dichlorobenzene	50.00	44.85	90	80-120
2,2-Dichloropropane	50.00	44.62	89	80-120
1,1-Dichloropropene	50.00	42.22	84	80-120
Dibromomethane	50.00	45.44	91	80-120
1,2-Dibromoethane	50.00	45.33	91	80-120
trans-1,2-Dichloroethen	50.00	45.27	90	80-120
1,1,1,2-Tetrachloroetha	50.00	45.52	91	80-120
1,1,1-Trichloroethane	50.00	43.54	87	80-120
1,1,2,2-Tetrachloroetha	50.00	44.71	89	80-120
1,1,2-Trichloroethane	50.00	44.55	89	80-120
1,1-Dichloroethane	50.00	44.26	88	80-120
1,1-Dichloroethene	50.00	43.02	86	80-120
Trichloroethene	50.00	44.33	89	80-120
1,2,3-Trichlorobenzene	50.00	51.26	102	80-120
Trichlorofluoromethane	50.00	41.97	84	80-120
1,2,4-Trichlorobenzene	50.00	49.34	99	80-120
1,2,4-Trimethylbenzene	50.00	44.00	88	80-120
Tetrachloroethene	50.00	41.29	82	80-120
1,2-Dichlorobenzene	50.00	45.04	90	80-120
1,2-Dichloroethane	50.00	45.12	90	80-120
1,2-Dichloropropane	50.00	46.11	92	80-120
1,3,5-Trimethylbenzene	50.00	43.20	86	80-120
1,3-Dichloropropane	50.00	44.68	89	80-120
1,4-Dichlorobenzene	50.00	44.16	88	80-120
Toluene	50.00	43.58	87	80-120
2-Butanone	100.00	108.02	108	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	43.08	86	80-120
2-Hexanone	100.00	95.15	95	80-120
4-Chlorotoluene	50.00	43.22	86	80-120
tert-Butylbenzene	50.00	40.89	82	80-120
4-Methyl-2-Pentanone	100.00	91.36	91	80-120
Acetone	100.00	109.54	110	80-120
Benzene	50.00	44.84	90	80-120
Bromobenzene	50.00	45.66	91	80-120
Bromochloromethane	50.00	43.92	88	80-120
Bromodichloromethane	50.00	45.59	91	80-120
Bromoform	50.00	47.84	96	80-120
Bromomethane	50.00	47.86	96	80-120
Carbon Disulfide	100.00	89.81	90	80-120
Carbon Tetrachloride	50.00	41.93	84	80-120
Chlorobenzene	50.00	43.59	87	80-120
Chloroethane	50.00	42.99	86	80-120
Chloroform	50.00	44.56	89	80-120
Chloromethane	50.00	45.59	91	80-120
cis-1,2-Dichloroethene	50.00	44.88	90	80-120
Dibromochloromethane	50.00	45.50	91	80-120
Dichlorodifluoromethane	50.00	41.03	82	80-120
Ethylbenzene	50.00	42.63	85	80-120
Hexachlorobutadiene	50.00	45.33	91	80-120
Isopropylbenzene	50.00	41.73	83	80-120
m,p-Xylenes	100.00	87.22	87	80-120
Methylene Chloride	50.00	48.15	96	80-120
n-Butylbenzene	50.00	42.35	85	80-120
n-Propylbenzene	50.00	42.33	85	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	51.91	104	80-120
o-Xylene	50.00	44.49	89	80-120
sec-Butylbenzene	50.00	40.27	80	80-120
Styrene	50.00	46.11	92	80-120
Vinyl Chloride	50.00	43.77	88	80-120
1,2,3-Trichloropropane	50.00	47.51	95	80-120
p-Isopropyltoluene	50.00	41.31	83	80-120
1,2-Dibromo-3-Chloropro	50.00	44.96	90	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Lab File ID: X092401 BFB Injection Date: 09/24/20

Instrument ID: VOA6 BFB Injection Time: 1110

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.0
75	30.0 - 60.0% of mass 95	50.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Greater than 50.0% of mass 95	61.7
175	5.0 - 9.0% of mass 174	4.5 (7.4)1
176	95.0 - 101.0% of mass 174	59.2 (95.9)1
177	5.0 - 9.0% of mass 176	4.1 (7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X092402	09/24/20	1134
02	VSTD000.5	VSTD000.5	X092403	09/24/20	1158
03	VSTD001	VSTD001	X092404	09/24/20	1246
04	VSTD002	VSTD002	X092405	09/24/20	1310
05	VSTD005	VSTD005	X092406	09/24/20	1333
06	VSTD020	VSTD020	X092407	09/24/20	1357
07	VSTD050	VSTD050	X092408	09/24/20	1421
08	VSTD100	VSTD100	X092409	09/24/20	1445
09	VSTD150	VSTD150	X092410	09/24/20	1509
10	VSTD200	VSTD200	X092411	09/24/20	1533
11	ICV	ICV	X092414	09/24/20	1645
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF0.25: X092402 RF0.5: X092403 RF1: X092404
RF2: X092405 RF5: X092406 RF20: X092407

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.604	0.628	0.568	0.604	0.541
trans-1,3-Dichloropropene		0.493	0.544	0.449	0.488	0.454
1,3-Dichlorobenzene		1.748	1.889	1.644	1.680	1.520
2,2-Dichloropropane		0.861	0.919	0.796	0.818	0.755
1,1-Dichloropropene		0.527	0.482	0.495	0.471	0.433
Dibromomethane		0.239	0.252	0.223	0.235	0.206
1,2-Dibromoethane		0.381	0.414	0.336	0.379	0.333
trans-1,2-Dichloroethene		0.537	0.588	0.521	0.545	0.506
1,1,1,2-Tetrachloroethane		0.377	0.392	0.346	0.354	0.332
1,1,1-Trichloroethane		0.761	0.888	0.781	0.820	0.738
1,1,2,2-Tetrachloroethane		0.972	1.064	0.959	0.972	0.806
1,1,2-Trichloroethane		0.329	0.353	0.304	0.315	0.282
1,1-Dichloroethane		1.171	1.218	1.028	1.103	0.991
1,1-Dichloroethene		0.476	0.539	0.431	0.448	0.435
Trichloroethene		0.372	0.414	0.359	0.376	0.338
1,2,3-Trichlorobenzene		0.212	0.229	0.179	0.207	0.172
Trichlorofluoromethane		0.757	0.831	0.697	0.720	0.706
1,2,4-Trichlorobenzene		2229	2921	5479	14272	49391
1,2,4-Trimethylbenzene		3.253	3.430	3.000	3.122	2.892
Tetrachloroethene		0.330	0.385	0.342	0.326	0.303
1,2-Dichlorobenzene		1.582	1.610	1.410	1.464	1.310
1,2-Dichloroethane		0.464	0.540	0.412	0.472	0.402
1,2-Dichloropropane		0.349	0.428	0.384	0.397	0.357
1,3,5-Trimethylbenzene		3.204	3.443	2.987	3.074	2.846
1,3-Dichloropropane		0.675	0.751	0.610	0.667	0.574
1,4-Dichlorobenzene		1.942	1.823	1.606	1.670	1.478
Toluene		1.763	1.942	1.682	1.757	1.559
2-Butanone		0.159	0.163	0.163	0.188	0.182
2-Chlorotoluene		2.978	3.094	2.683	2.737	2.473
2-Hexanone		0.236	0.214	0.234	0.236	0.212
4-Chlorotoluene		3.311	3.565	3.106	3.156	2.760
tert-Butylbenzene		2.792	2.908	2.555	2.536	2.344
4-Methyl-2-Pentanone		0.403	0.380	0.356	0.375	0.329
Acetone		4284	6768	9048	17679	61351
Benzene		1.490	1.723	1.410	1.500	1.365
Bromobenzene		1.061	1.189	1.028	1.073	0.964
Bromochloromethane		0.353	0.379	0.328	0.323	0.295
Bromodichloromethane		0.508	0.505	0.447	0.466	0.426
Bromoform		0.214	0.238	0.211	0.232	0.207
Bromomethane		3098	7731	11427	28439	96280
Carbon Disulfide		1.618	1.837	1.489	1.545	1.490
Carbon Tetrachloride		0.450	0.410	0.425	0.402	0.374
Chlorobenzene		1.160	1.233	1.044	1.068	0.953
Chloroethane		0.468	0.445	0.392	0.414	0.365

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010033

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF0.25: X092402 RF0.5: X092403 RF1: X092404
RF2: X092405 RF5: X092406 RF20: X092407

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		0.973	1.141	0.992	1.044	0.936
Chloromethane		0.732	0.710	0.650	0.686	0.643
cis-1,2-Dichloroethene		0.624	0.717	0.604	0.661	0.596
Dibromochloromethane		0.378	0.421	0.354	0.371	0.337
Dichlorodifluoromethane		2901	6629	12034	28274	113538
Ethylbenzene		0.570	0.644	0.540	0.559	0.508
Hexachlorobutadiene		3351	3302	5496	12681	49814
Isopropylbenzene		1.678	1.831	1.584	1.626	1.476
m,p-Xylenes		0.696	0.760	0.654	0.678	0.614
Methylene Chloride		5505	9684	16648	39690	137362
n-Butylbenzene		2.993	2.947	2.400	2.488	2.487
n-Propylbenzene		4.661	4.835	4.262	4.396	4.114
Naphthalene		0.532	0.476	0.478	0.463	0.420
o-Xylene		0.650	0.742	0.643	0.665	0.599
sec-Butylbenzene		4.025	3.986	3.550	3.514	3.338
Styrene		1.181	1.221	1.038	1.129	1.027
Vinyl Chloride		0.636	0.723	0.606	0.632	0.612
1,2,3-Trichloropropane		0.736	0.868	0.803	0.779	0.679
p-Isopropyltoluene		3.578	3.306	2.975	2.940	2.823
1,2-Dibromo-3-Chloropropane		0.058	0.078	0.056	0.065	0.056
1,2-Dichloroethane-d4		0.637	0.580	0.541	0.589	0.547
Dibromofluoromethane		0.609	0.515	0.484	0.562	0.504
Toluene-d8		1.586	1.355	1.300	1.446	1.276
4-Bromofluorobenzene		6772	10018	18232	43900	154353

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010033

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF50: X092408 RF100: X092409 RF150: X092410
RF200: X092411

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.531	0.554	0.562	0.570
trans-1,3-Dichloropropene	0.450	0.465	0.478	0.480
1,3-Dichlorobenzene	1.386	1.553	1.537	1.516
2,2-Dichloropropane	0.678	0.750	0.745	0.743
1,1-Dichloropropene	0.383	0.447	0.452	0.449
Dibromomethane	0.201	0.206	0.207	0.207
1,2-Dibromoethane	0.318	0.318	0.326	0.320
trans-1,2-Dichloroethene	0.468	0.502	0.498	0.497
1,1,1,2-Tetrachloroethane	0.315	0.332	0.335	0.334
1,1,1-Trichloroethane	0.665	0.757	0.758	0.763
1,1,2,2-Tetrachloroethane	0.793	0.790	0.812	0.789
1,1,2-Trichloroethane	0.267	0.267	0.269	0.265
1,1-Dichloroethane	0.940	0.990	0.979	0.982
1,1-Dichloroethene	0.402	0.438	0.438	0.436
Trichloroethene	0.312	0.346	0.350	0.351
1,2,3-Trichlorobenzene	0.166	0.178	0.198	0.197
Trichlorofluoromethane	0.622	0.737	0.739	0.735
1,2,4-Trichlorobenzene	124784	247364	386588	497987
1,2,4-Trimethylbenzene	2.510	2.888	2.846	2.846
Tetrachloroethene	0.253	0.302	0.303	0.299
1,2-Dichlorobenzene	1.213	1.315	1.322	1.304
1,2-Dichloroethane	0.392	0.397	0.401	0.401
1,2-Dichloropropane	0.342	0.357	0.358	0.359
1,3,5-Trimethylbenzene	2.440	2.900	2.851	2.826
1,3-Dichloropropane	0.548	0.549	0.557	0.551
1,4-Dichlorobenzene	1.360	1.498	1.505	1.492
Toluene	1.388	1.491	1.504	1.480
2-Butanone	0.206	0.191	0.196	0.193
2-Chlorotoluene	2.151	2.449	2.412	2.404
2-Hexanone	0.214	0.214	0.219	0.215
4-Chlorotoluene	2.445	2.790	2.754	2.736
tert-Butylbenzene	1.924	2.379	2.368	2.343
4-Methyl-2-Pentanone	0.328	0.322	0.335	0.330
Acetone	153009	255829	368697	468128
Benzene	1.277	1.365	1.367	1.372
Bromobenzene	0.889	0.967	0.962	0.959
Bromochloromethane	0.279	0.285	0.284	0.285
Bromodichloromethane	0.413	0.436	0.439	0.443
Bromoform	0.210	0.214	0.221	0.218
Bromomethane	218171	446857	643333	822601
Carbon Disulfide	1.386	1.542	1.534	1.534
Carbon Tetrachloride	0.324	0.399	0.407	0.408
Chlorobenzene	0.877	0.936	0.944	0.940
Chloroethane	0.344	0.372	0.362	0.363

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010033

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF50: X092408 RF100: X092409 RF150: X092410
RF200: X092411

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	0.890	0.916	0.913	0.918
Chloromethane	0.611	0.690	0.702	0.738
cis-1,2-Dichloroethene	0.564	0.583	0.581	0.582
Dibromochloromethane	0.328	0.340	0.345	0.342
Dichlorodifluoromethane	235600	565982	843912	1091943
Ethylbenzene	0.448	0.501	0.506	0.502
Hexachlorobutadiene	102822	246513	372303	468444
Isopropylbenzene	1.252	1.488	1.497	1.463
m,p-Xylenes	0.536	0.600	0.602	0.596
Methylene Chloride	303593	605902	861961	1112263
n-Butylbenzene	2.066	2.630	2.602	2.574
n-Propylbenzene	3.438	4.273	4.216	4.190
Naphthalene	0.431	0.435	0.482	0.479
o-Xylene	0.540	0.589	0.591	0.584
sec-Butylbenzene	2.708	3.473	3.444	3.403
Styrene	0.962	1.004	1.008	1.014
Vinyl Chloride	0.579	0.668	0.670	0.686
1,2,3-Trichloropropane	0.688	0.684	0.685	0.661
p-Isopropyltoluene	2.366	2.953	2.951	2.908
1,2-Dibromo-3-Chloropropane	0.058	0.054	0.058	0.059
1,2-Dichloroethane-d4	0.545	0.544	0.536	0.539
Dibromofluoromethane	0.491	0.491	0.483	0.485
Toluene-d8	1.241	1.226	1.208	1.191
4-Bromofluorobenzene	368645	706326	1011330	1311827

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010033

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.57360540		5.610	15.000
trans-1,3-Dichloropropene	AVRG		0.47808495		6.216	15.000
1,3-Dichlorobenzene	AVRG		1.60820005		9.290	15.000
2,2-Dichloropropane	AVRG		0.78485479		9.213	15.000
1,1-Dichloropropene	AVRG		0.45997920		8.917	15.000
Dibromomethane	AVRG		0.21954206		8.424	15.000
1,2-Dibromoethane	AVRG		0.34744899		10.056	15.000
trans-1,2-Dichloroethene	AVRG		0.51794510		6.732	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.34649256		7.010	15.000
1,1,1-Trichloroethane	AVRG		0.77008815		7.853	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.88418602		12.031	15.000
1,1,2-Trichloroethane	AVRG		0.29447500		10.989	15.000
1,1-Dichloroethane	AVRG		1.04452475		9.239	15.000
1,1-Dichloroethene	AVRG		0.44955963		8.570	15.000
Trichloroethene	AVRG		0.35763128		7.969	15.000
1,2,3-Trichlorobenzene	AVRG		0.19324402		10.853	15.000
Trichlorofluoromethane	AVRG		0.72688377		7.613	15.000
1,2,4-Trichlorobenzene	LINR	2.746e-002	2.56905140		0.9990136	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.97638251		8.970	15.000
Tetrachloroethene	AVRG		0.31588869		11.507	15.000
1,2-Dichlorobenzene	AVRG		1.39230756		9.714	15.000
1,2-Dichloroethane	AVRG		0.43110842		11.681	15.000
1,2-Dichloropropane	AVRG		0.37022435		7.462	15.000
1,3,5-Trimethylbenzene	AVRG		2.95239803		9.456	15.000
1,3-Dichloropropane	AVRG		0.60913171		11.944	15.000
1,4-Dichlorobenzene	AVRG		1.59712325		11.610	15.000
Toluene	AVRG		1.61839272		11.010	15.000
2-Butanone	AVRG		0.18251644		9.154	15.000
2-Chlorotoluene	AVRG		2.59810067		11.606	15.000
2-Hexanone	AVRG		0.22171060		4.753	15.000
4-Chlorotoluene	AVRG		2.95805584		11.804	15.000
tert-Butylbenzene	AVRG		2.46106150		11.636	15.000
4-Methyl-2-Pentanone	AVRG		0.35097560		8.234	15.000
Acetone	LINR	-0.1016719	8.80554020		0.9985929	0.9900000
Benzene	AVRG		1.42999265		9.055	15.000
Bromobenzene	AVRG		1.01036504		8.748	15.000
Bromochloromethane	AVRG		0.31247517		11.396	15.000
Bromodichloromethane	AVRG		0.45345872		7.310	15.000
Bromoform	AVRG		0.21840761		4.729	15.000
Bromomethane	LINR	-4.77e-003	2.49479317		0.9998004	0.9900000
Carbon Disulfide	AVRG		1.55286116		7.945	15.000
Carbon Tetrachloride	AVRG		0.39996836		8.725	15.000
Chlorobenzene	AVRG		1.01718815		11.612	15.000
Chloroethane	AVRG		0.39167182		10.785	15.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010033

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		0.96918894		8.302	15.000
Chloromethane	AVRG		0.68469210		6.196	15.000
cis-1,2-Dichloroethene	AVRG		0.61256258		7.953	15.000
Dibromochloromethane	AVRG		0.35728688		8.083	15.000
Dichlorodifluoromethane	LINR	4.145e-002	1.87764616		0.9978779	0.9900000
Ethylbenzene	AVRG		0.53098194		10.520	15.000
Hexachlorobutadiene	2ORDR	1.818e-002	2.84082074	-0.1088007	0.9976659	0.9900000
Isopropylbenzene	AVRG		1.54388319		10.527	15.000
m,p-Xylenes	AVRG		0.63748802		10.458	15.000
Methylene Chloride	LINR	-1.42e-002	1.85325576		0.9998633	0.9900000
n-Butylbenzene	AVRG		2.57642229		10.827	15.000
n-Propylbenzene	AVRG		4.26505902		9.136	15.000
Naphthalene	AVRG		0.46624710		7.340	15.000
o-Xylene	AVRG		0.62252020		9.561	15.000
sec-Butylbenzene	AVRG		3.49356204		10.998	15.000
Styrene	AVRG		1.06500599		8.405	15.000
Vinyl Chloride	AVRG		0.64586993		6.955	15.000
1,2,3-Trichloropropane	AVRG		0.73140081		9.692	15.000
p-Isopropyltoluene	AVRG		2.97795815		11.100	15.000
1,2-Dibromo-3-Chloropropane	AVRG		6.034e-002		11.963	15.000
1,2-Dichloroethane-d4	AVRG		0.56206107		6.062	15.000
Dibromofluoromethane	AVRG		0.51378762		8.475	15.000
Toluene-d8	AVRG		1.31453904		9.856	15.000
4-Bromofluorobenzene	LINR	-1.66e-002	2.33275892		0.9999120	0.9900000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092401.D

Date : 24-SEP-2020 11:10

Client ID: BFB

Instrument: voa6.i

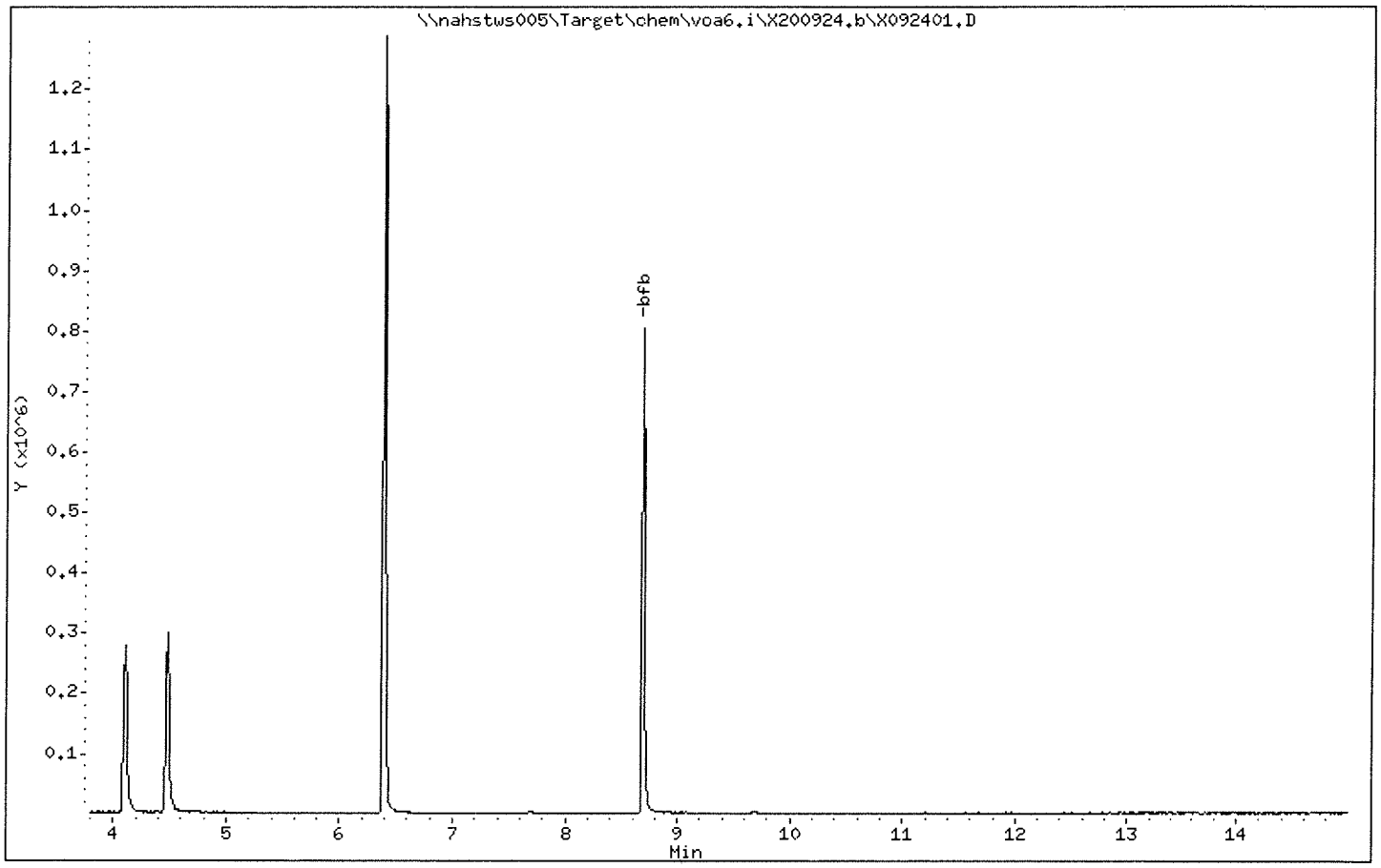
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092401.D

Date : 24-SEP-2020 11:10

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

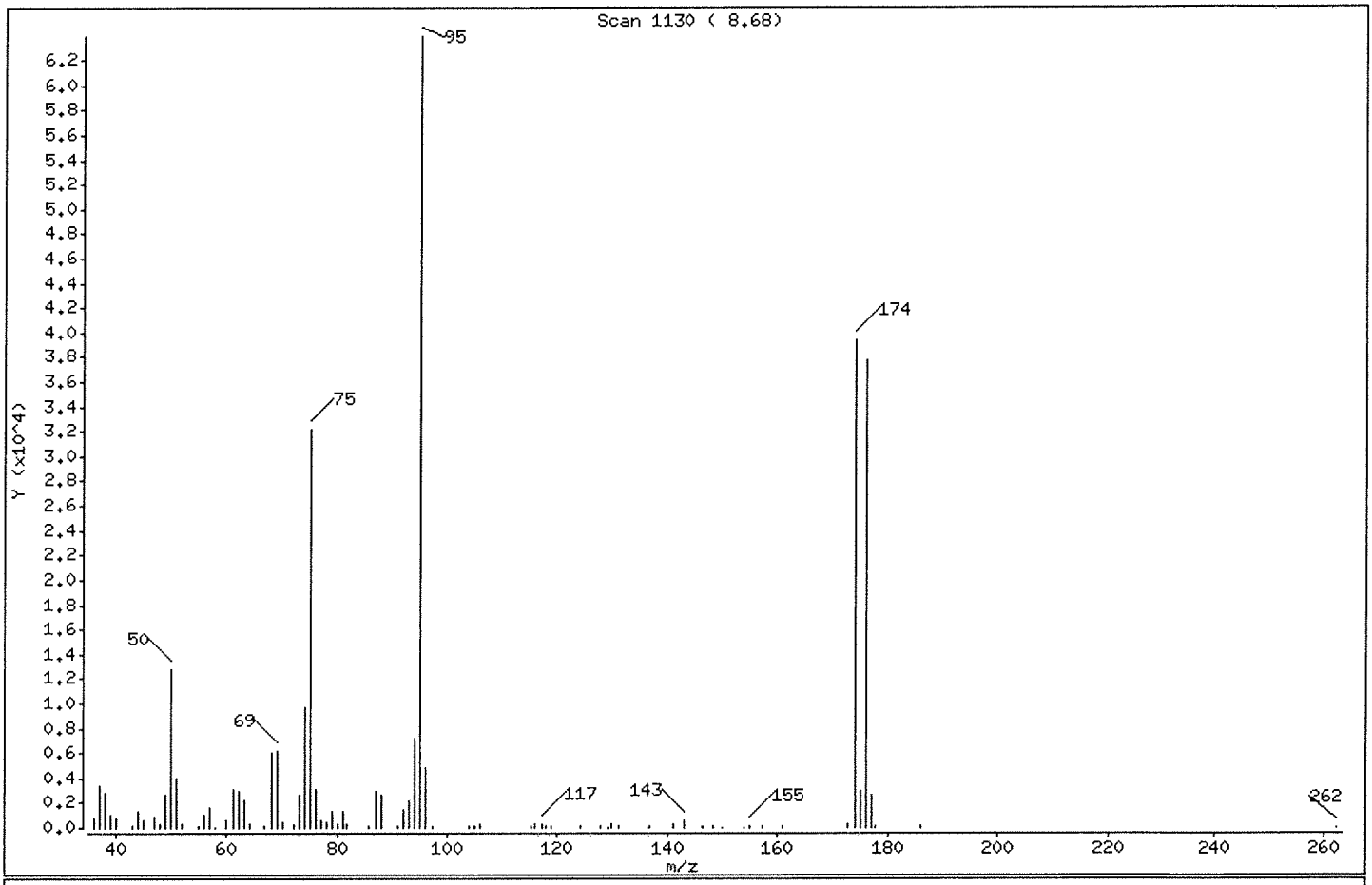
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.97
75	30.00 - 60.00% of mass 95	50.32
96	5.00 - 9.00% of mass 95	7.53
173	Less than 2.00% of mass 174	0.54 (0.87)
174	Greater than 50.00% of mass 95	61.71
175	5.00 - 9.00% of mass 174	4.54 (7.36)
176	95.00 - 101.00% of mass 174	59.18 (95.90)
177	5.00 - 9.00% of mass 176	4.14 (6.99)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092401.D

Date : 24-SEP-2020 11:10

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: X092401.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.10
Number of points: 79

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	680	62.10	2916	88.00	2589	131.00	177
37.10	3328	63.10	2146	90.90	197	136.90	95
38.10	2848	64.20	251	92.10	1499	141.00	363
39.10	1092	67.00	144	93.10	2228	143.00	535
40.10	702	68.10	6060	94.10	7204	146.20	84
43.20	90	69.10	6113	95.10	63928	148.20	88
44.10	1373	70.10	387	96.10	4811	149.90	62
45.10	600	72.10	357	97.20	145	153.90	52
47.10	929	73.10	2682	104.00	204	155.00	162
48.00	358	74.10	9632	105.00	136	157.10	128
49.10	2668	75.10	32168	105.80	273	160.80	100
50.10	12768	76.10	3061	115.20	130	172.90	344
51.10	4025	77.00	582	116.00	238	174.00	39448
52.10	271	78.10	388	117.10	274	175.10	2905
55.00	135	79.00	1342	117.90	175	176.00	37832
56.10	1094	80.00	329	119.00	202	177.00	2644
57.10	1650	81.10	1363	124.00	76	177.90	81
58.10	54	81.90	267	127.90	200	186.10	193
60.00	635	85.90	78	129.00	73	262.20	52
61.10	3138	87.10	3005	129.90	222		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 24-SEP-2020 11:34
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 15:33 Cal File: X092411.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

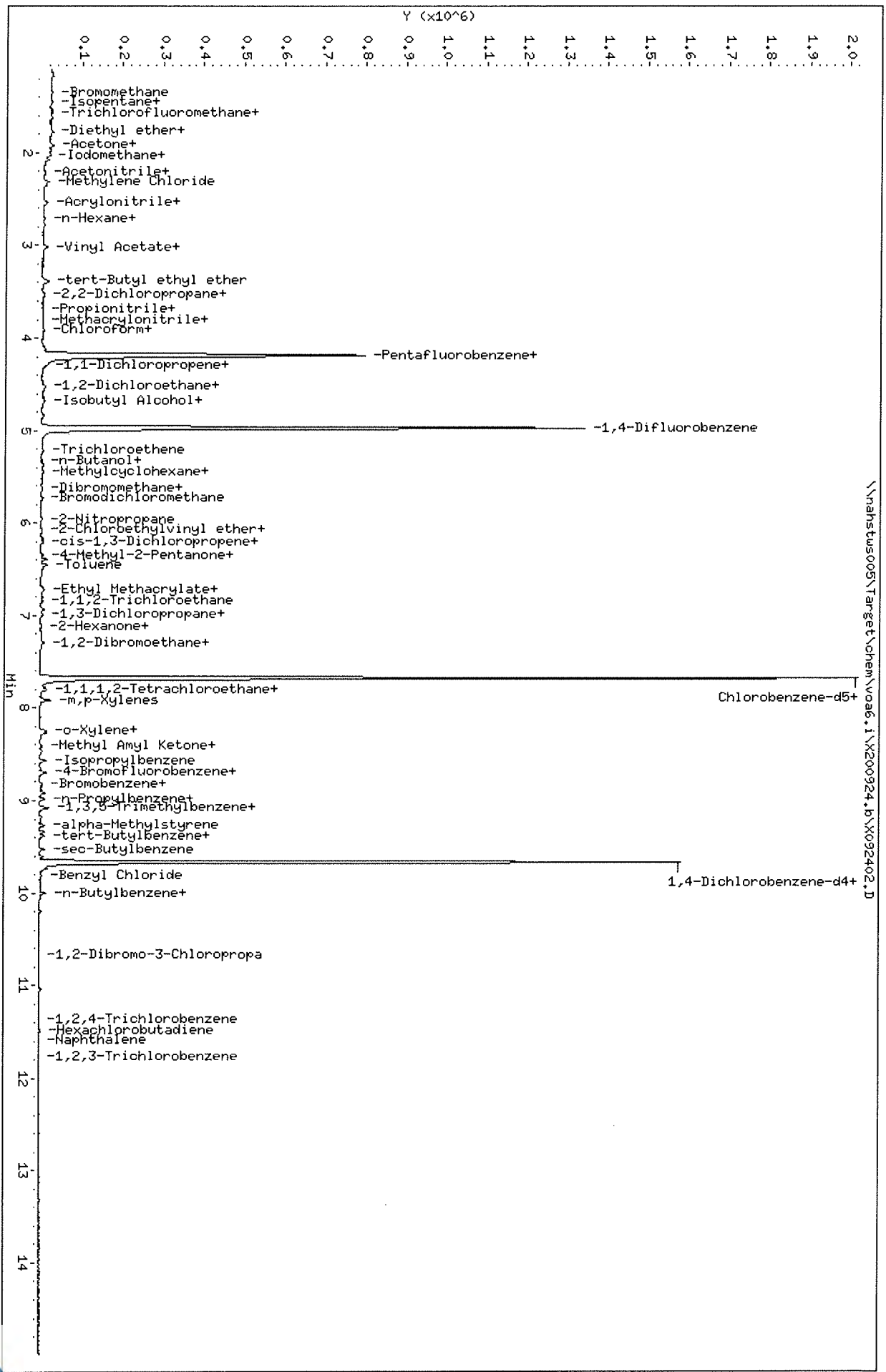
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	689255	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1110772	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	970158	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	403723	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.110	(0.981)	2163	0.25000	0.30(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	3033	0.25000	0.39(Ta)
$	48 Toluene-d8	98	6.395	6.395	(0.834)	9651	0.25000	0.37(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5599	0.25000	(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	2084	0.25000	0.30(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	3047	0.25000	0.28(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	2033	0.25000	0.28(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1754	0.25000	0.30(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	4149	0.25000	0.28(Ta)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	1960	0.25000	0.31(a)
	32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	4394	0.25000	0.43(a)
	93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	209	0.25000	0.13(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	1939	0.25000	0.32(aM)
	90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.175)	629	0.25000	1.57(aM)
	79 1,2,4-Trimethylbenzene	105	9.390	9.390	(0.971)	6923	0.25000	0.28(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	24	0.25000	0.04(aM)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	2205	0.25000	0.32(a)
	88 1,2-Dichlorobenzene	146	10.006	10.006	(1.035)	3283	0.25000	0.29(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D Page 2
Report Date: 13-Oct-2020 11:23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.576	4.576	(0.921)	3037	0.25000	0.31(aM)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	2261	0.25000	0.27(aM)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	6914	0.25000	0.29(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	3732	0.25000	0.28(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	3561	0.25000	0.30(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	4213	0.25000	0.32(a)
26 2,2-Dichloropropane	77	3.509	3.509	(0.838)	3427	0.25000	0.31(a)
24 2-Butanone	43	3.623	3.623	(0.865)	834	0.50000	0.33(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	6603	0.25000	0.31(a)
52 2-Hexanone	43	7.126	7.126	(0.929)	2395	0.50000	0.55(a)
77 4-Chlorotoluene	91	9.082	9.082	(0.939)	6800	0.25000	0.28(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	6876	0.25000	0.28(a)
45 4-Methyl-2-Pentanone	43	6.345	6.345	(0.827)	4043	0.50000	0.59(a)
10 Acetone	43	1.983	1.983	(0.473)	3858	0.50000	(a)
37 Benzene	78	4.526	4.526	(0.911)	9036	0.25000	0.28(a)
74 Bromobenzene	156	8.817	8.817	(0.912)	2319	0.25000	0.28(a)
29 Bromochloromethane	128	3.810	3.810	(0.909)	1564	0.25000	0.36(aM)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	2701	0.25000	0.26(aM)
66 Bromoform	173	8.415	8.415	(1.097)	1037	0.25000	0.24(aM)
6 Bromomethane	94	1.345	1.345	(0.321)	2296	0.25000	0.17(aM)
19 Carbon Disulfide	76	2.076	2.076	(0.496)	13194	0.50000	0.61(a)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	2765	0.25000	0.31(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	6427	0.25000	0.32(a)
7 Chloroethane	64	1.410	1.410	(0.337)	1828	0.25000	0.33(aM)
28 Chloroform	83	3.917	3.917	(0.935)	4124	0.25000	0.30(a)
3 Chloromethane	50	1.080	1.080	(0.258)	2721	0.25000	0.28(aM)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.846)	2548	0.25000	0.30(a)
46 cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	3539	0.25000	0.27(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	2043	0.25000	0.29(a)
44 Dibromomethane	93	5.565	5.565	(1.120)	1356	0.25000	0.27(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1988	0.25000	2.34(aM)
61 Ethylbenzene	106	7.807	7.807	(1.018)	2951	0.25000	0.28(a)
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	750	0.25000	1.17(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	9283	0.25000	0.30(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	7240	0.50000	0.58(a)
17 Methylene Chloride	84	2.312	2.312	(0.552)	4057	0.25000	(a)
87 n-Butylbenzene	91	9.998	9.998	(1.034)	5273	0.25000	0.25(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	10348	0.25000	0.30(a)
92 Naphthalene	128	11.589	11.589	(1.199)	788	0.25000	0.20(a)
63 o-Xylene	106	8.251	8.251	(1.076)	3465	0.25000	0.28(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	8177	0.25000	0.28(a)
64 Styrene	104	8.265	8.265	(1.078)	5747	0.25000	0.27(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	5920	0.25000	0.29(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	1901	0.25000	0.31(a)
50 Toluene	91	6.453	6.453	(0.841)	9946	0.25000	0.31(a)
20 trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	2138	0.25000	0.29(a)
51 trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	2811	0.25000	0.26(a)
38 Trichloroethene	130	5.221	5.221	(1.050)	2204	0.25000	0.27(a)
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	2639	0.25000	0.26(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	2201	0.25000	0.24(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D
Date : 24-SEP-2020 11:34
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092403.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 24-SEP-2020 11:58
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 11:34 Cal File: X092402.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

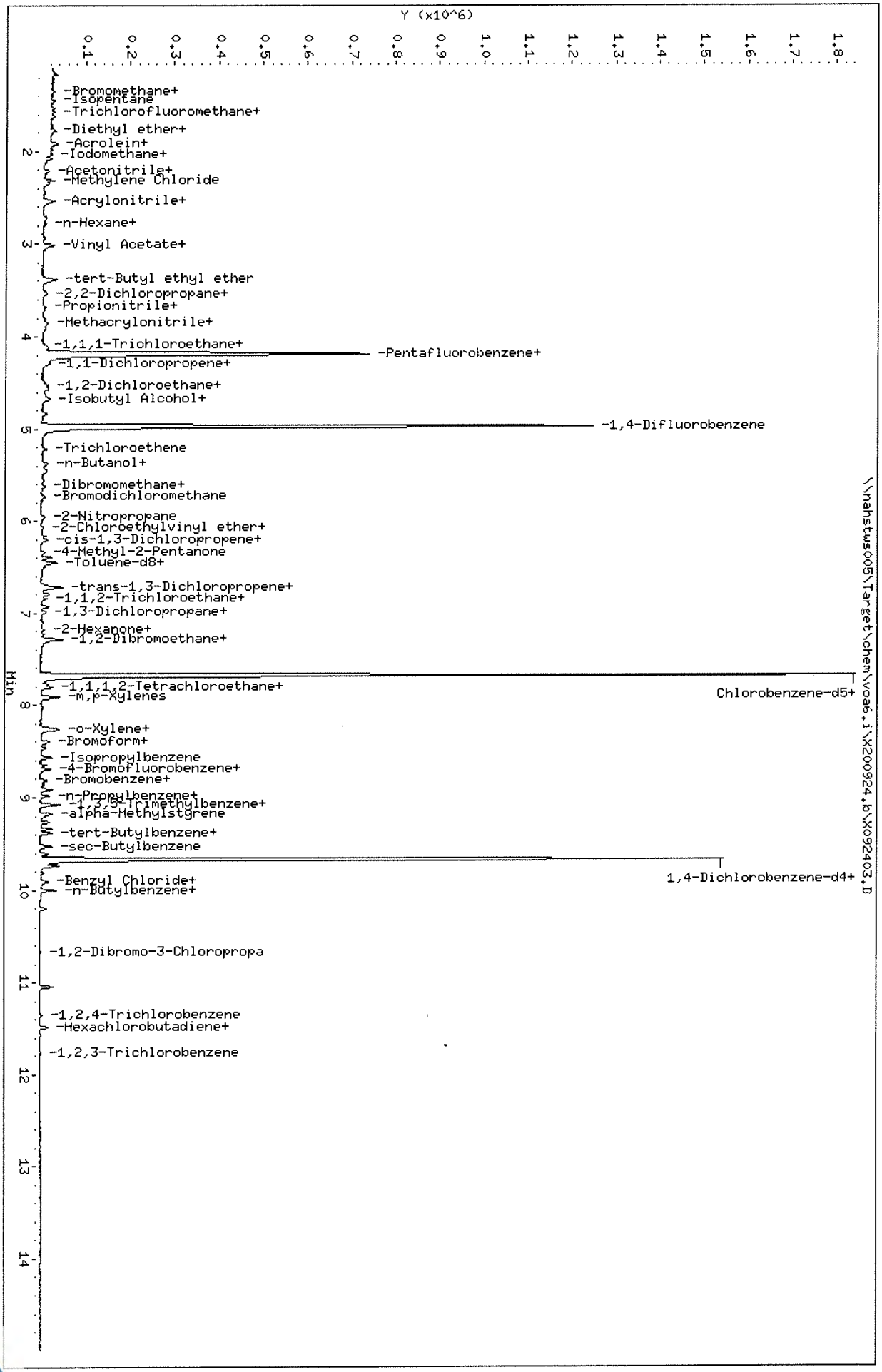
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	642784	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1019136	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	901245	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	392686	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.981)	3913	0.50000	0.59(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	4097	0.50000	0.56(a)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	14296	0.50000	0.60(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	6772	0.50000	0.04(aM)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3395	0.50000	0.54(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	4890	0.50000	0.49(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3817	0.50000	0.54(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2965	0.50000	0.55(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	7525	0.50000	0.56(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	3062	0.50000	0.52(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	5375	0.50000	0.57(a)
93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	833	0.50000	0.54(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	2889	0.50000	0.50(aM)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	2229	0.50000	2.10(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	12774	0.50000	0.54(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	230	0.50000	0.48(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3438	0.50000	0.54(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	6211	0.50000	0.56(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092403.D Page 2
Report Date: 13-Oct-2020 11:23

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	4729	0.50000	0.53(aM)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	3559	0.50000	0.47(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	12580	0.50000	0.54(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6864	0.50000	0.54(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	6082	0.50000	0.55(a)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.002)	7626	0.50000	0.60(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.841)	5532	0.50000	0.54(a)
24	2-Butanone	43	3.638	3.638	(0.868)	2048	1.00000	0.87(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	11695	0.50000	0.57(a)
52	2-Hexanone	43	7.105	7.105	(0.926)	4262	1.00000	1.06(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	13001	0.50000	0.55(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	14051	0.50000	0.60(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	7266	1.00000	1.14(a)
10	Acetone	43	1.983	1.983	(0.473)	4284	1.00000	(a)
37	Benzene	78	4.526	4.526	(0.911)	15191	0.50000	0.52(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	4166	0.50000	0.52(a)
29	Bromochloromethane	128	3.810	3.810	(0.909)	2272	0.50000	0.56(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	5173	0.50000	0.55(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1929	0.50000	0.48(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	3098	0.50000	0.36(a)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	20804	1.00000	1.04(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4583	0.50000	0.56(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	10454	0.50000	0.57(a)
7	Chloroethane	64	1.410	1.410	(0.337)	3007	0.50000	0.59(a)
28	Chloroform	83	3.917	3.917	(0.935)	6256	0.50000	0.50(a)
3	Chloromethane	50	1.081	1.081	(0.258)	4707	0.50000	0.53(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	4012	0.50000	0.50(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	6161	0.50000	0.52(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	3409	0.50000	0.52(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	2436	0.50000	0.54(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	2901	0.50000	2.49(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	5137	0.50000	0.53(a)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	3351	0.50000	2.12(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	15126	0.50000	0.54(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	12539	1.00000	1.09(a)
17	Methylene Chloride	84	2.313	2.313	(0.552)	5505	0.50000	0.08(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	11754	0.50000	0.58(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	18305	0.50000	0.54(a)
92	Naphthalene	128	11.574	11.574	(1.197)	2091	0.50000	0.57(aM)
63	o-Xylene	106	8.251	8.251	(1.076)	5859	0.50000	0.52(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	15807	0.50000	0.57(a)
64	Styrene	104	8.272	8.272	(1.078)	10644	0.50000	0.55(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	10963	0.50000	0.56(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	2972	0.50000	0.52(a)
50	Toluene	91	6.453	6.453	(0.841)	15888	0.50000	0.54(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	3450	0.50000	0.51(a)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	5027	0.50000	0.51(a)
38	Trichloroethene	130	5.221	5.221	(1.050)	3796	0.50000	0.52(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	4865	0.50000	0.52(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	4088	0.50000	0.49(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

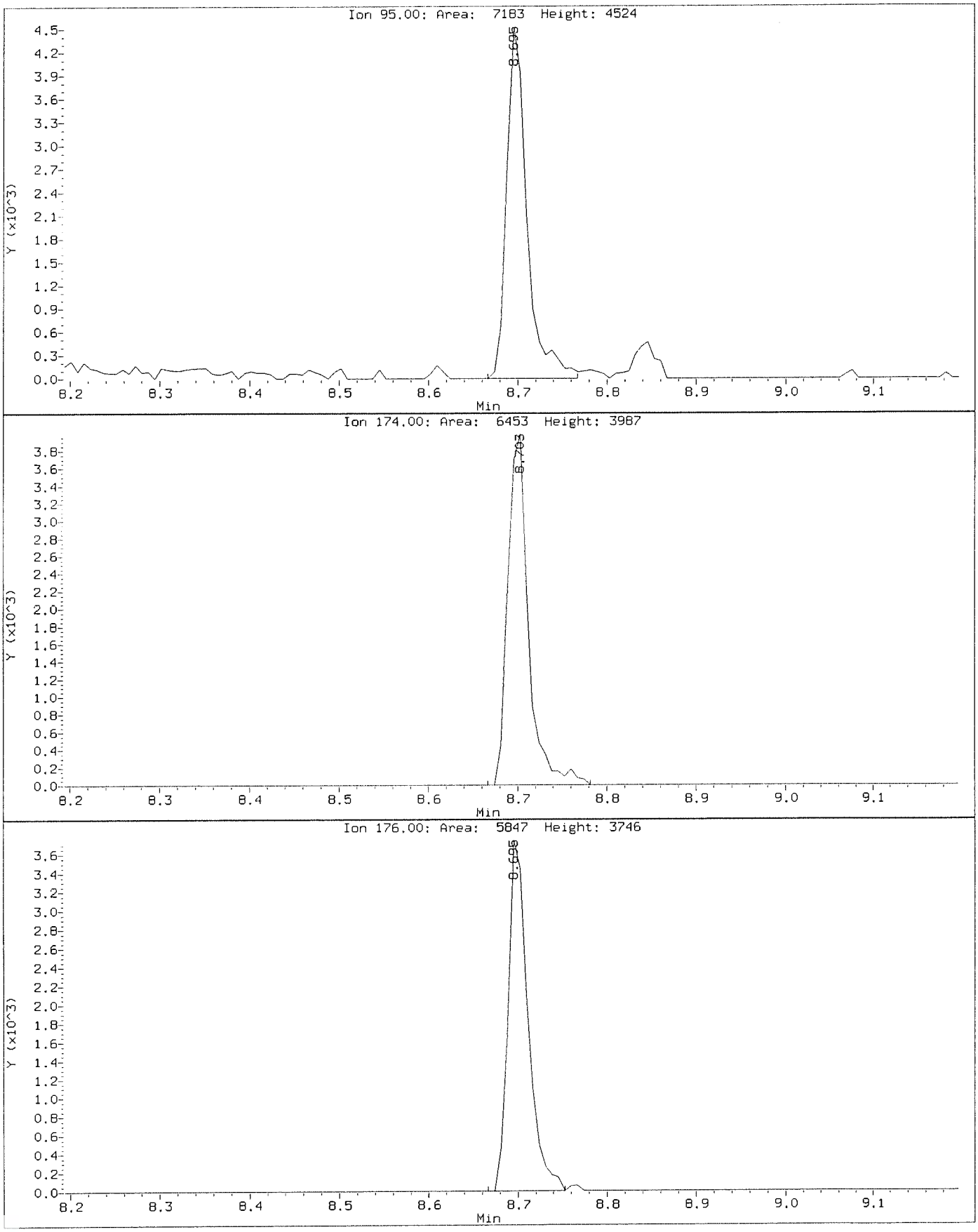


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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

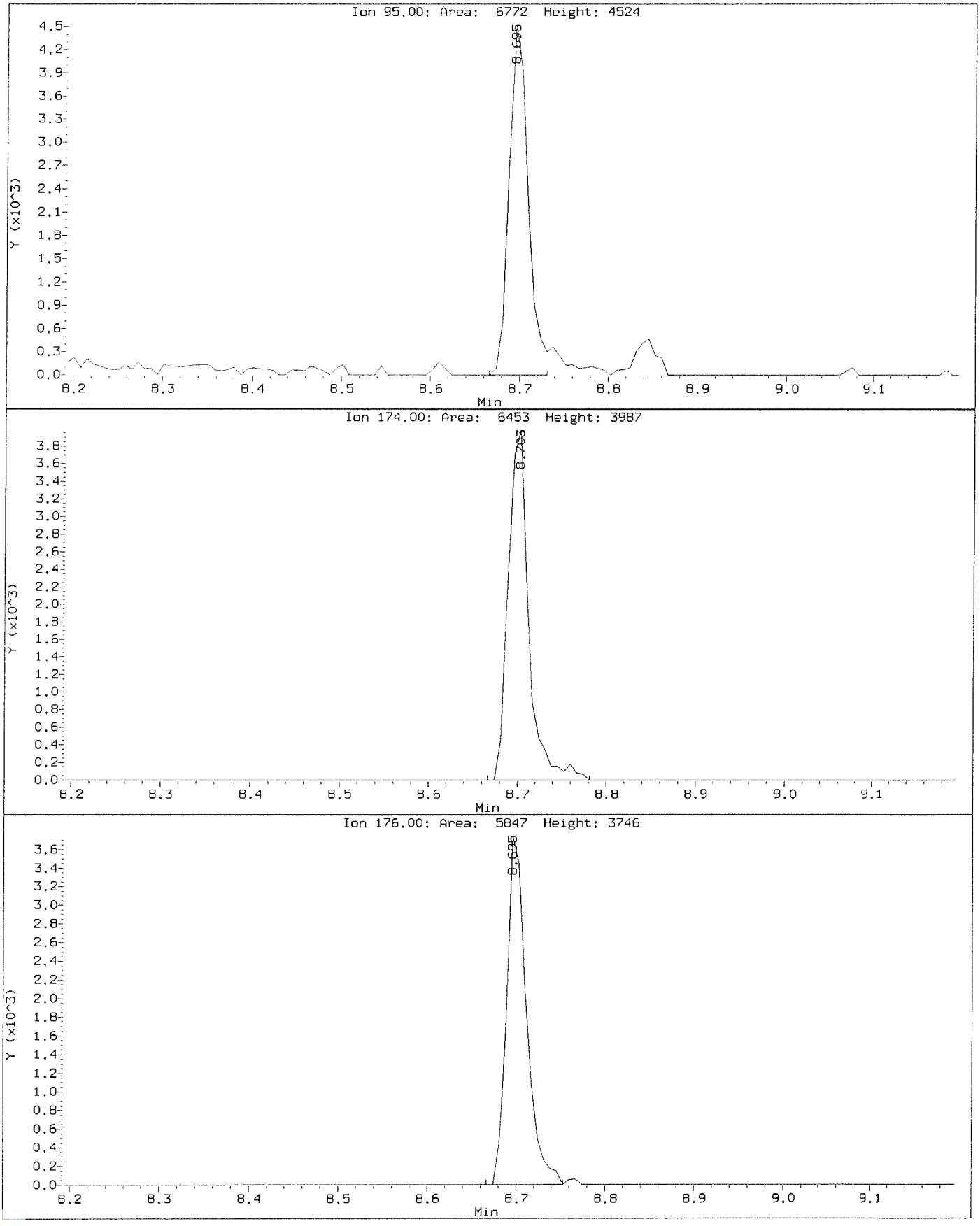
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Bromofluorobenzene
CAS Number: 460-00-4



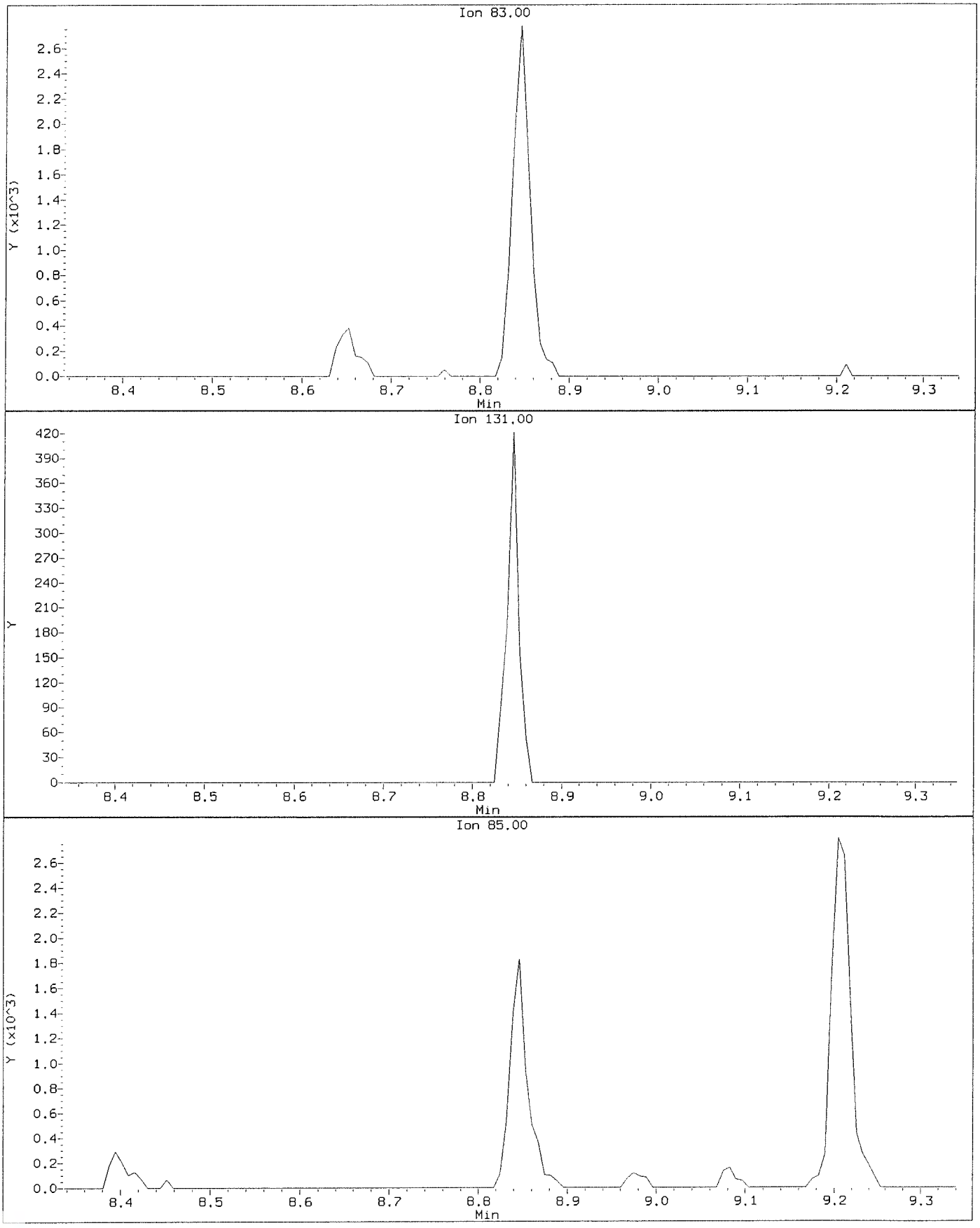
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Bromofluorobenzene
CAS Number: 460-00-4



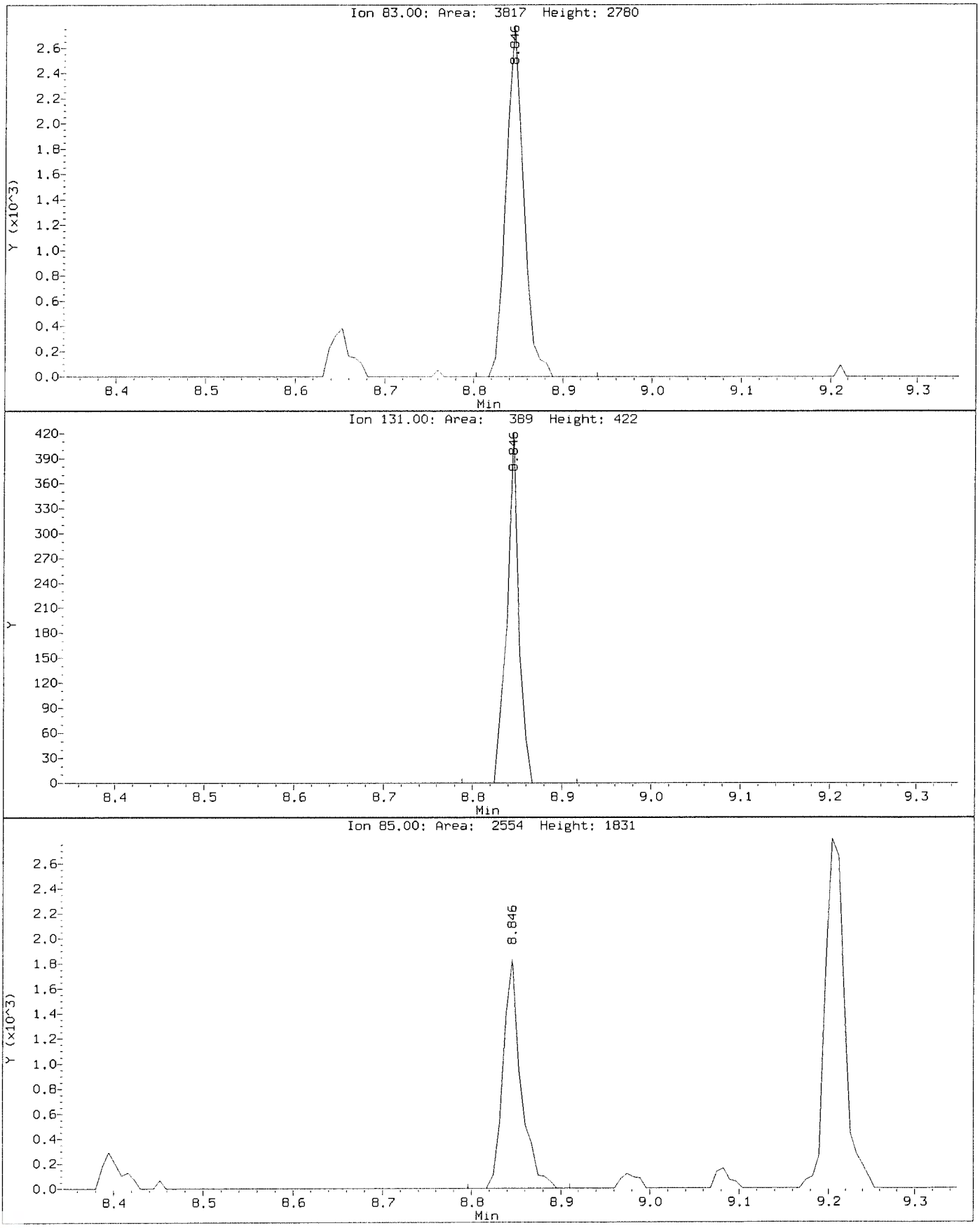
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



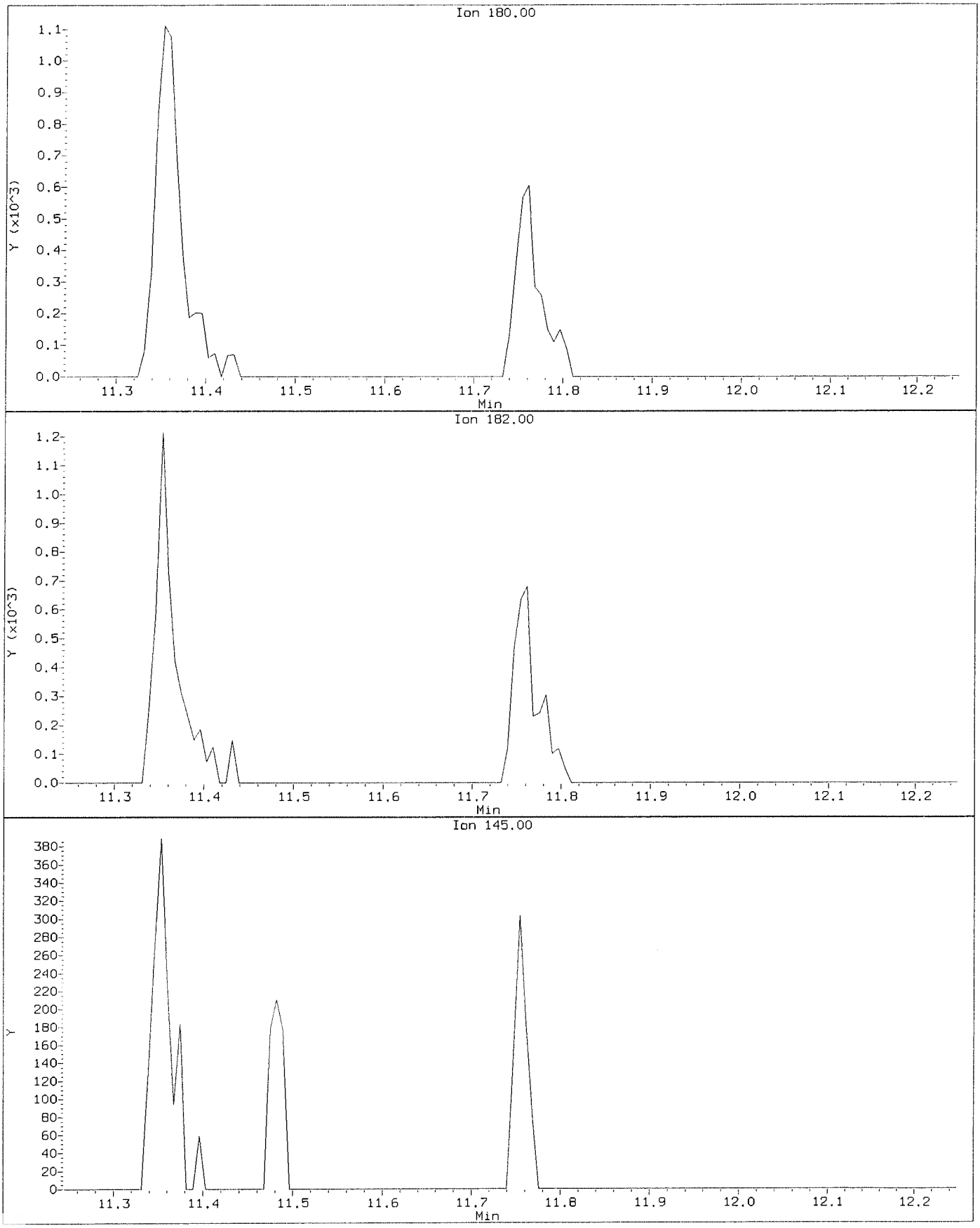
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



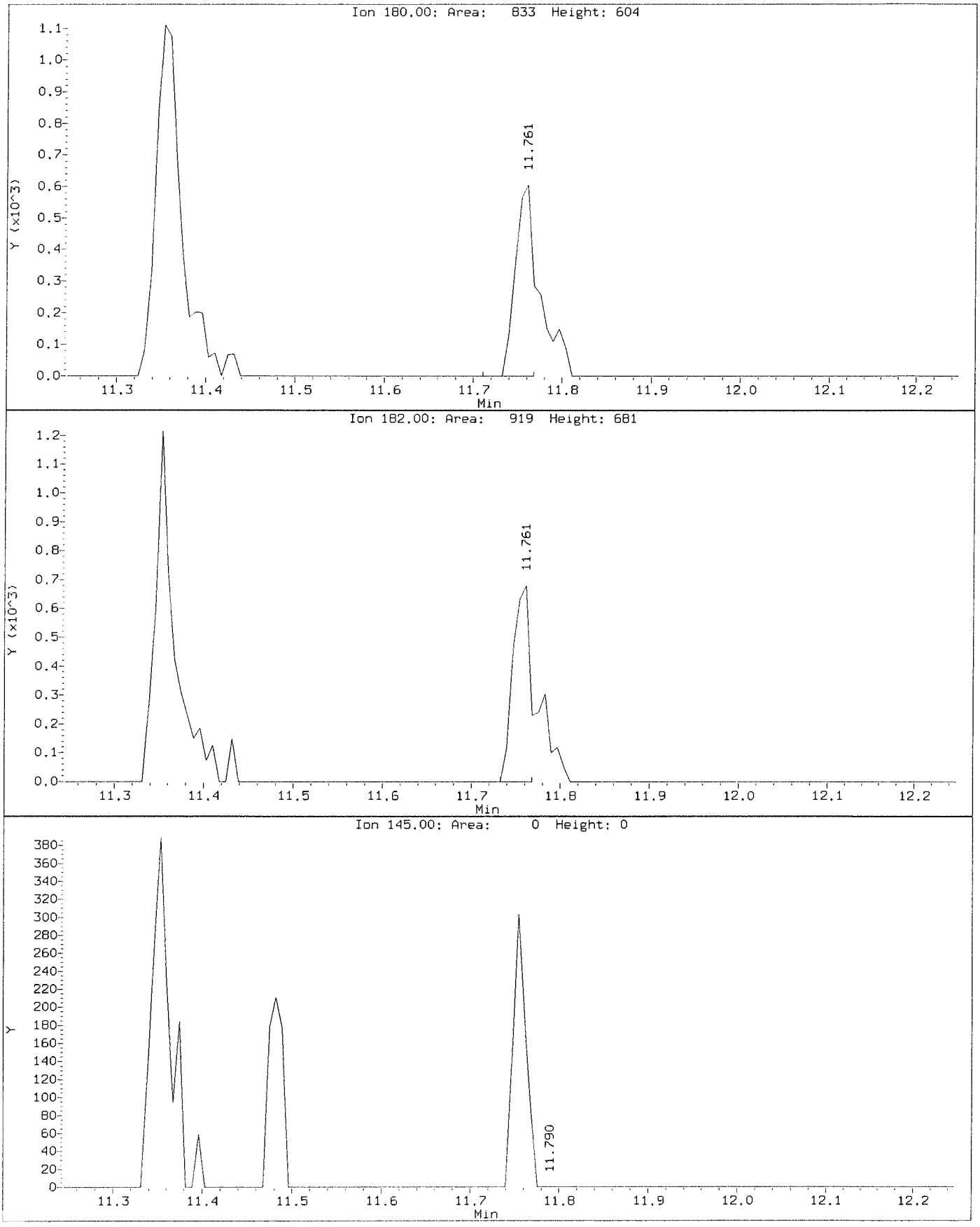
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



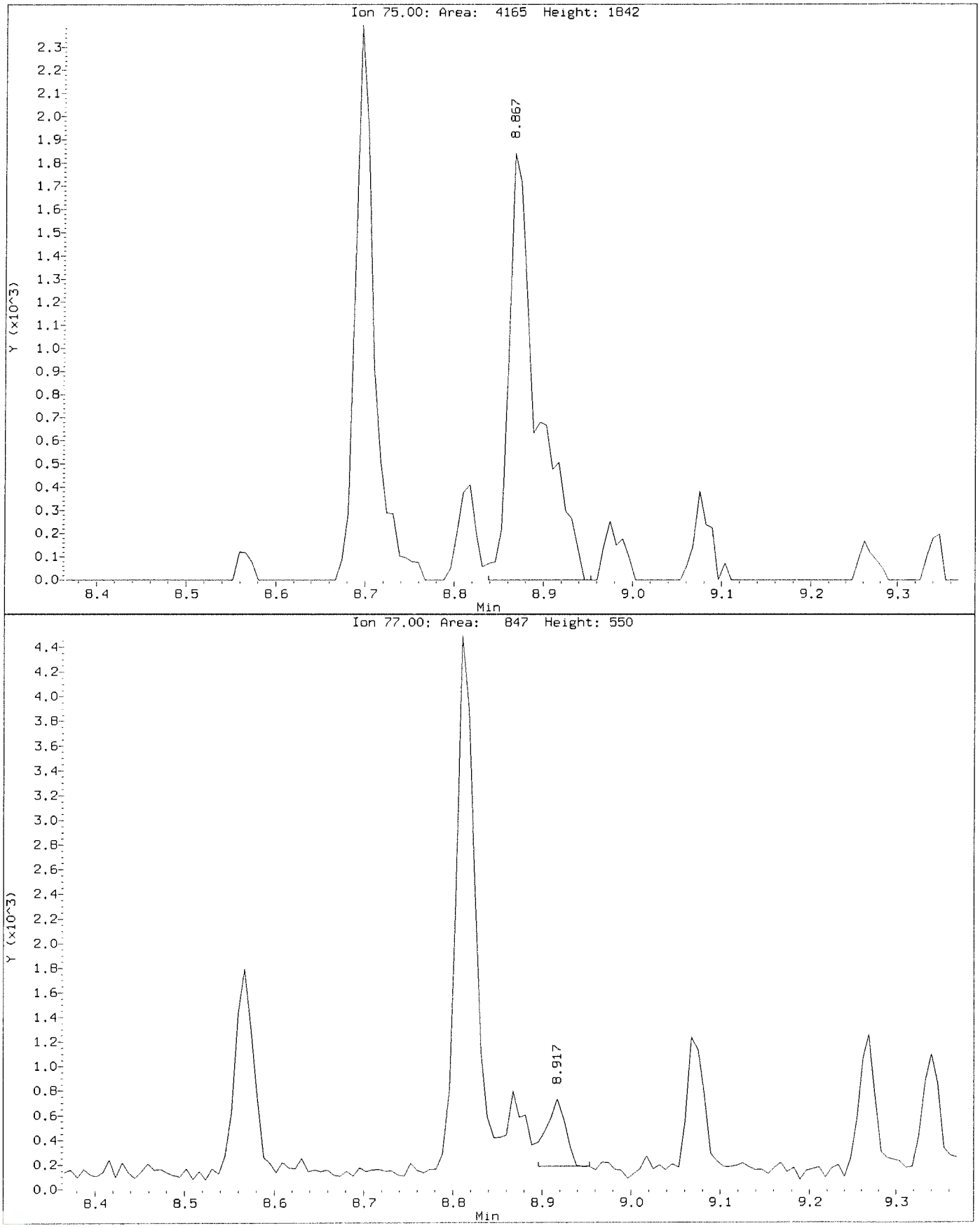
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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



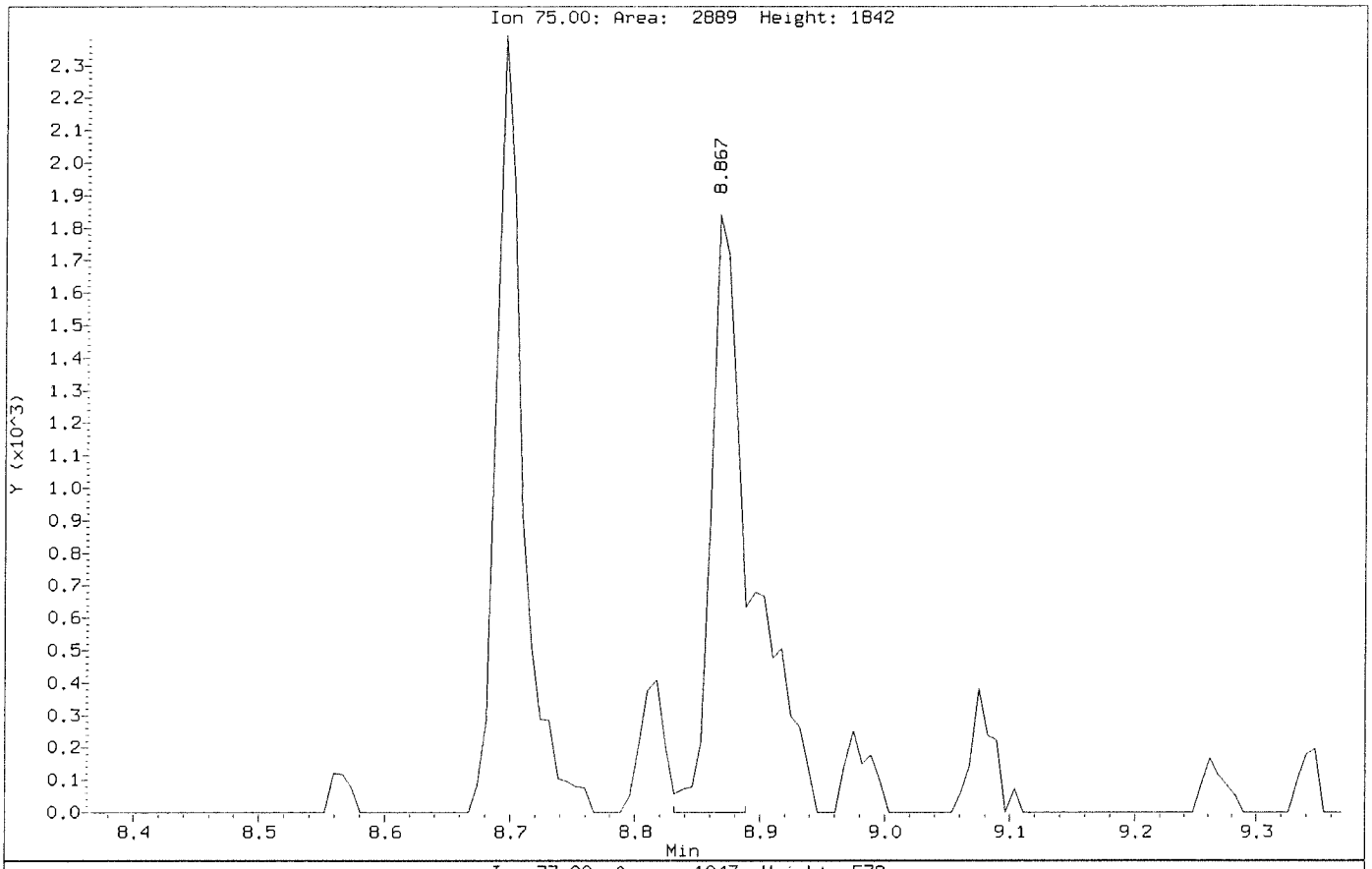
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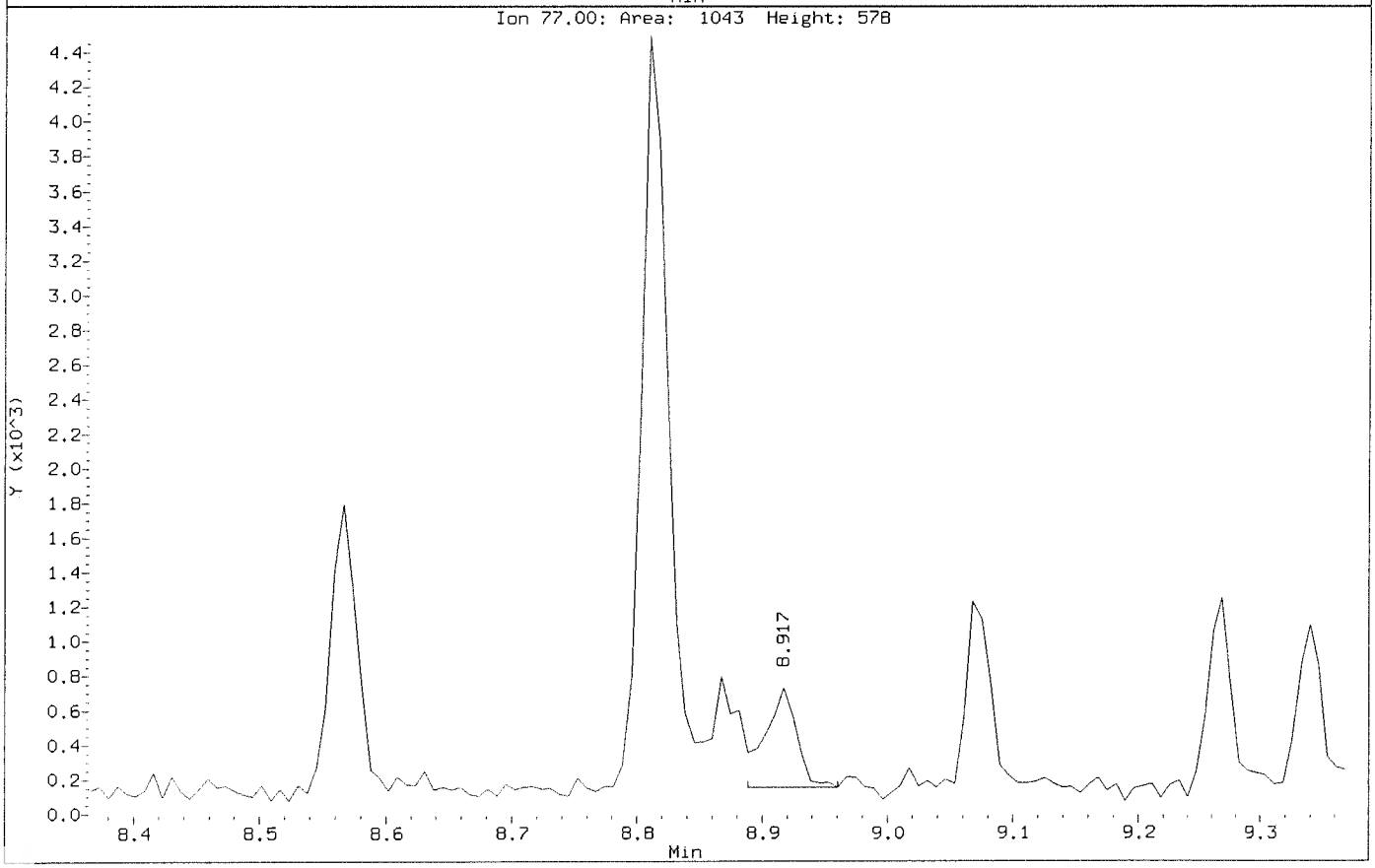
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Instrument: voa6.i
Client Sample ID: VSTD000.5

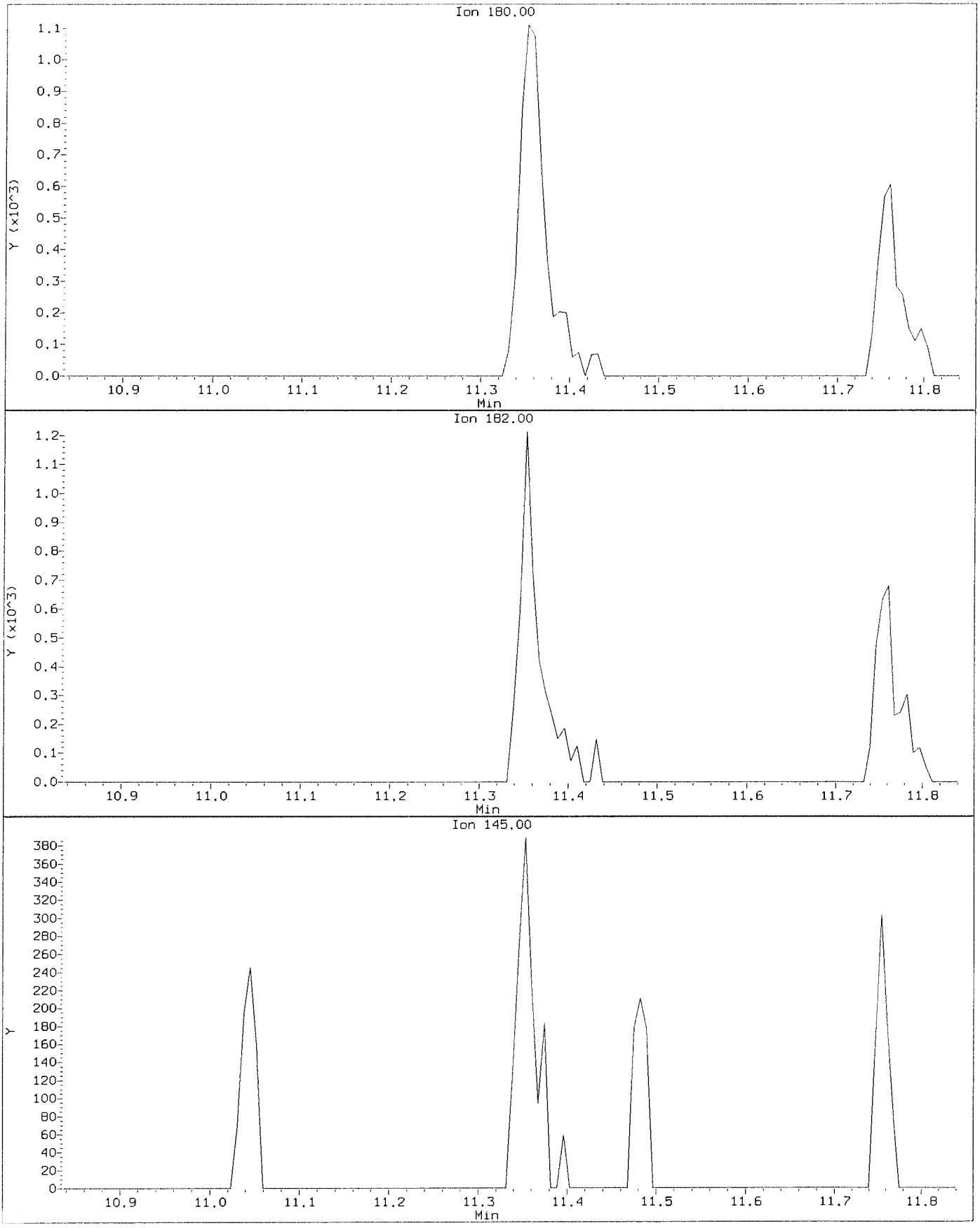
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





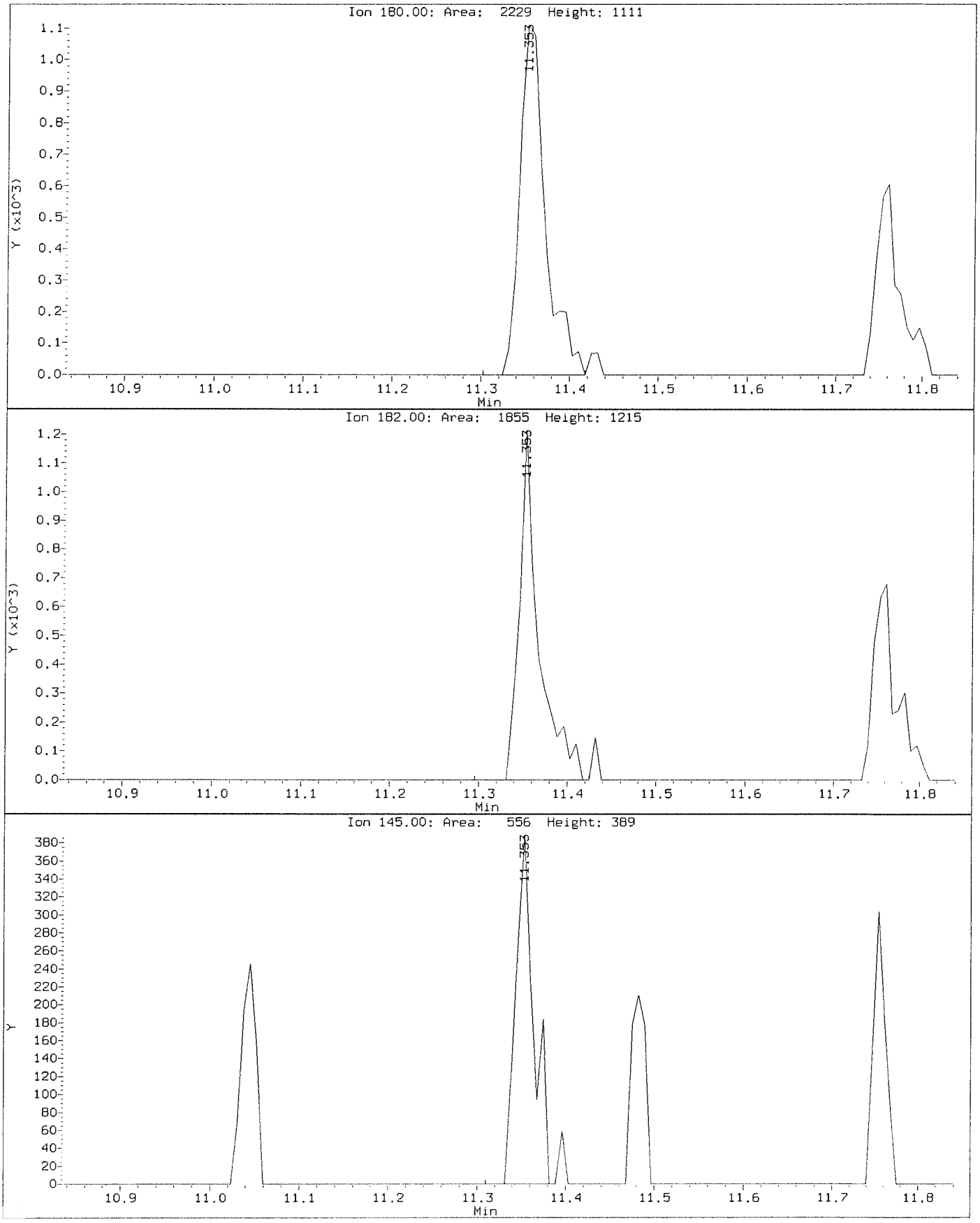
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



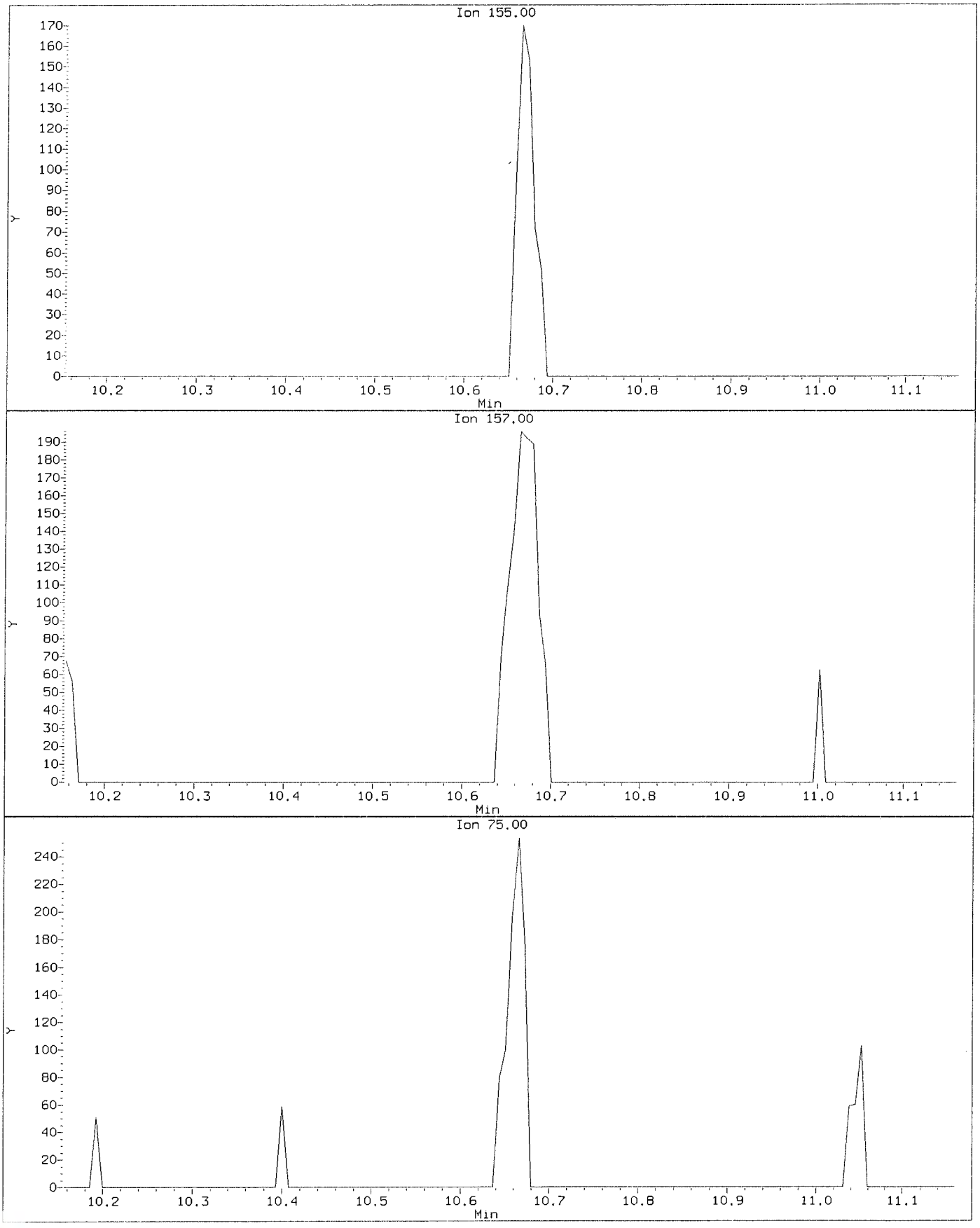
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



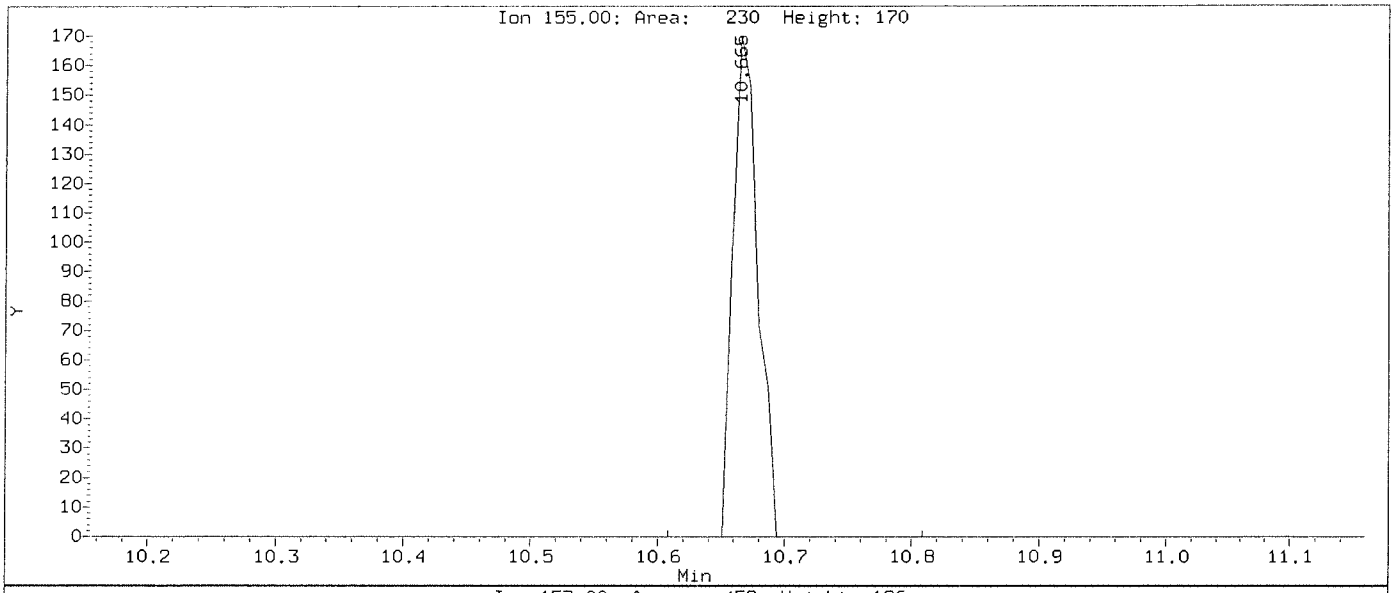
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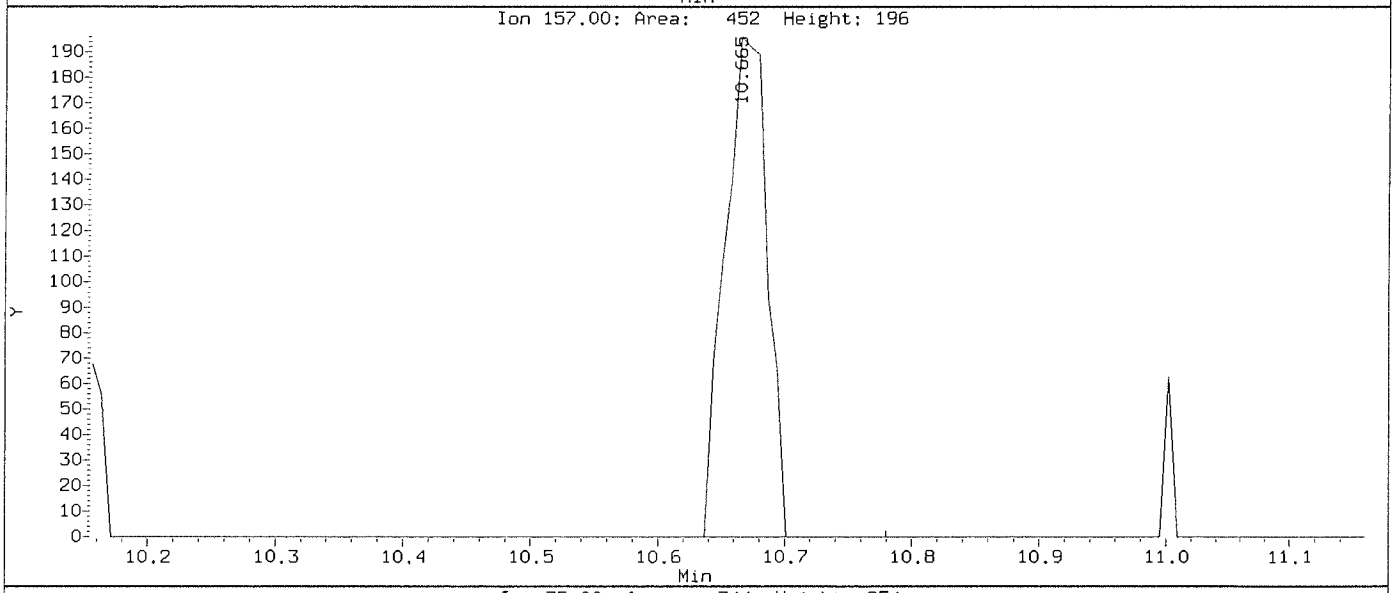
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

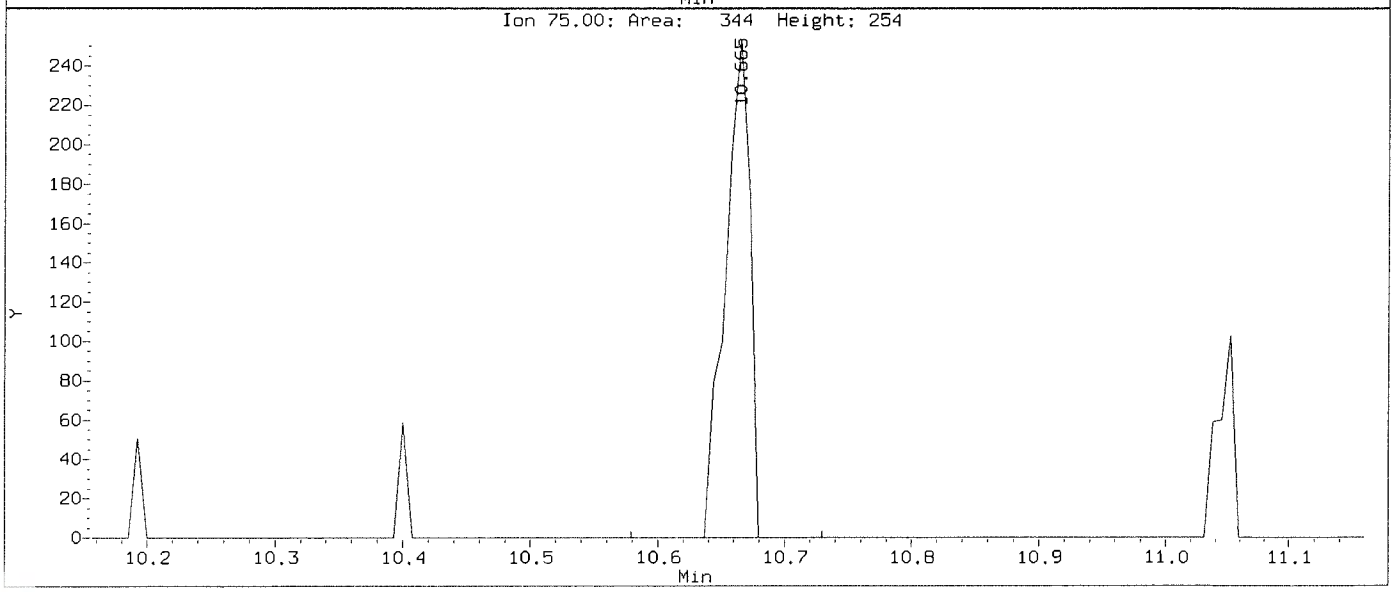


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Instrument: voa6.i
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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

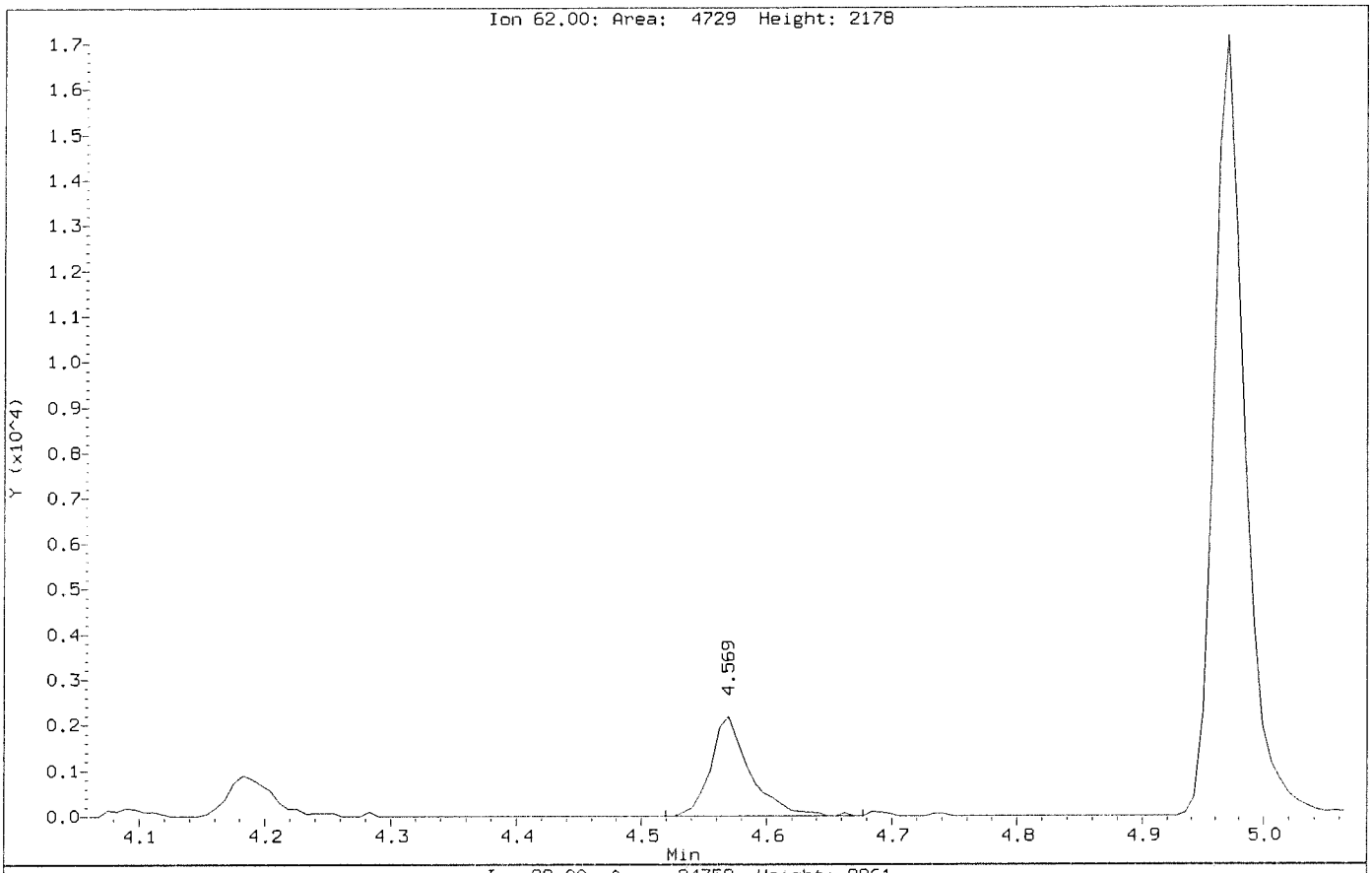


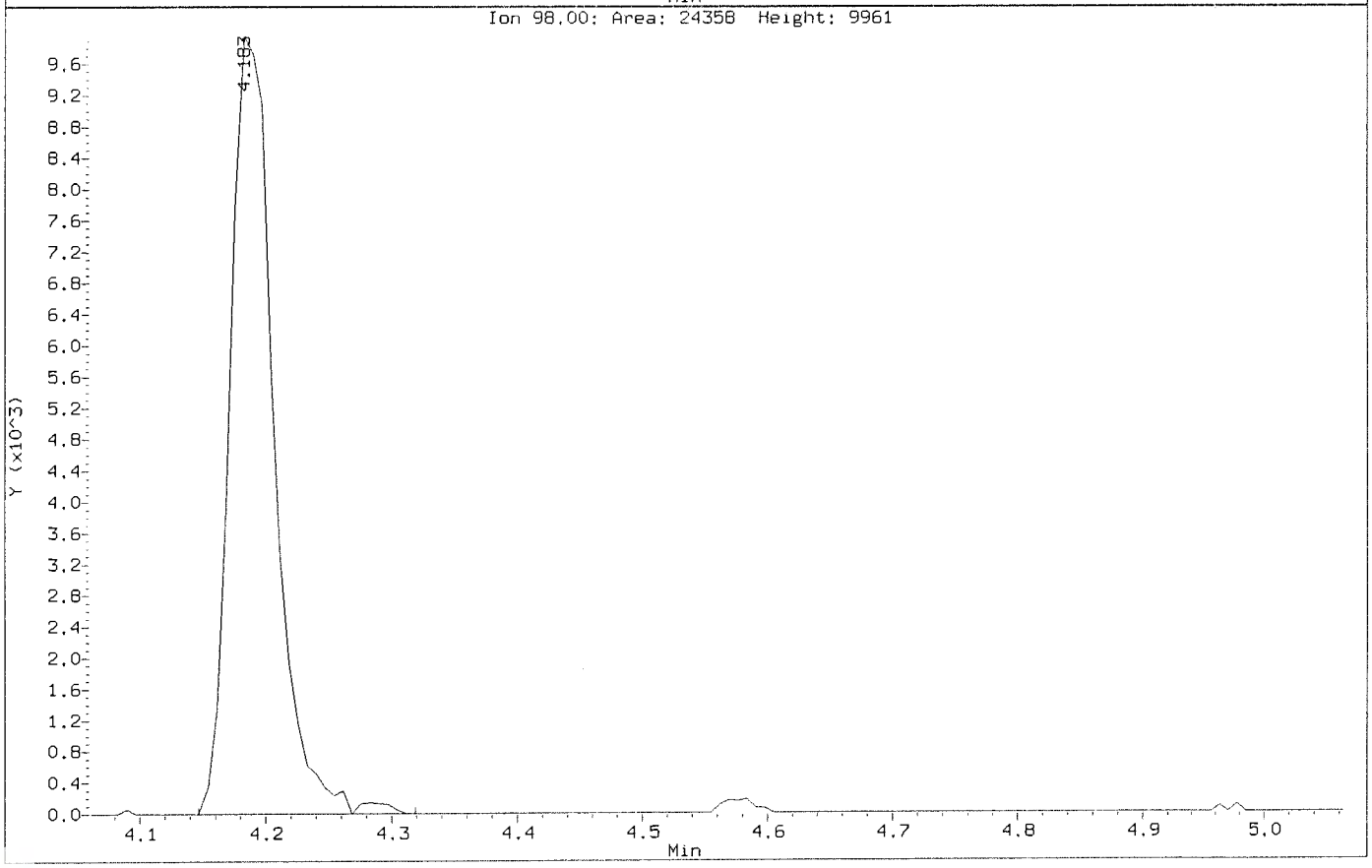




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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

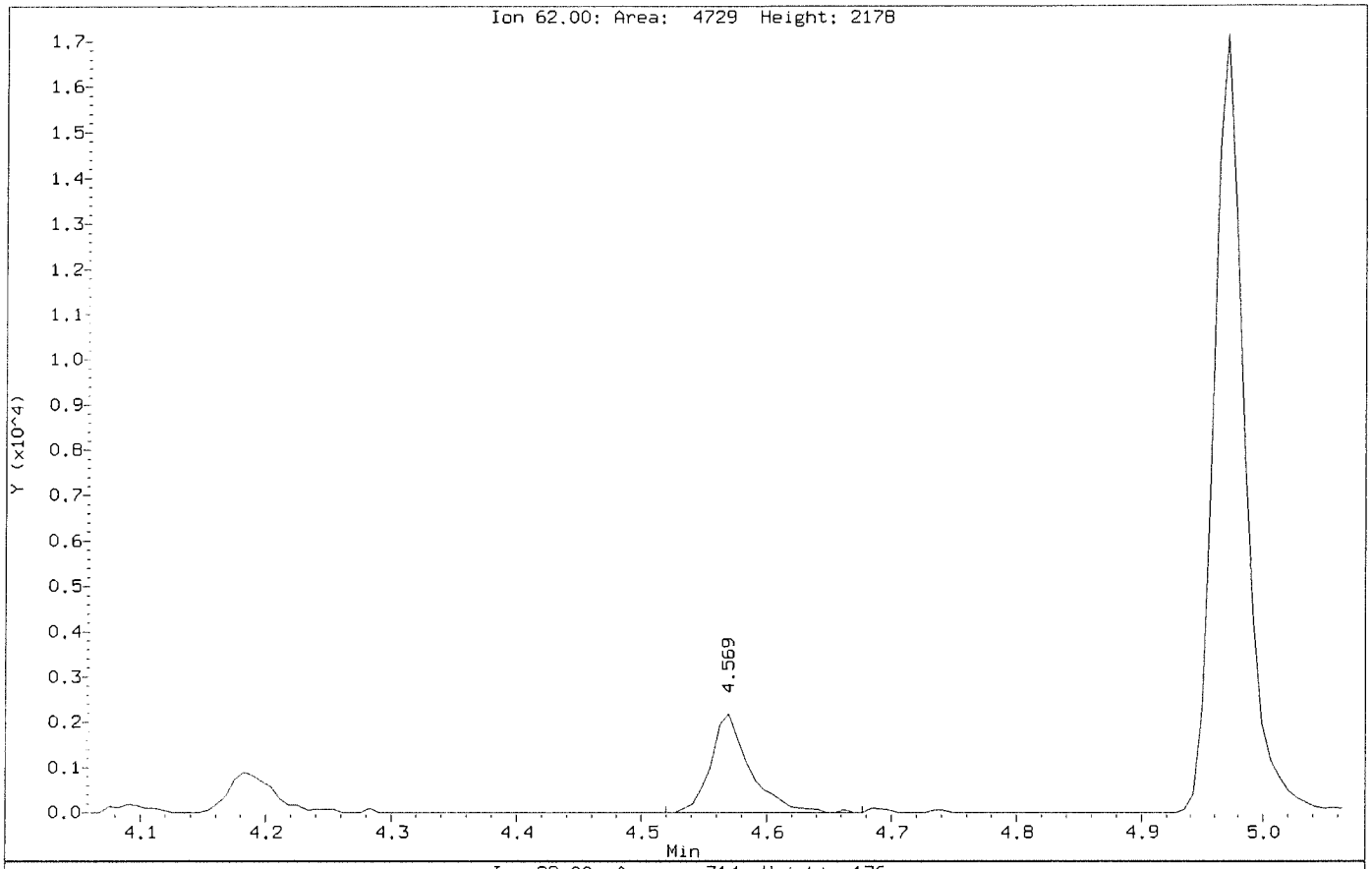
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

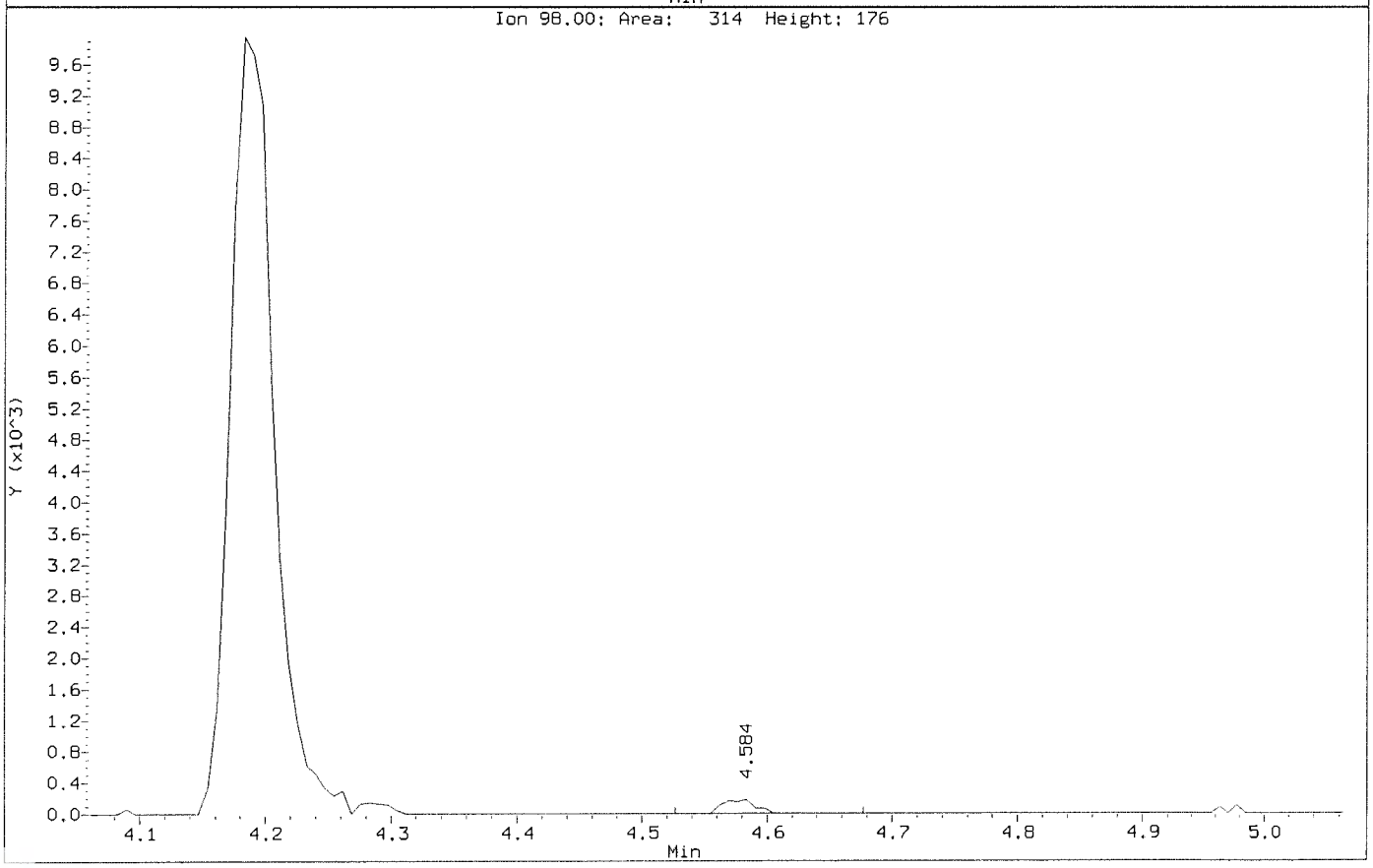




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Instrument: voa6.i
Client Sample ID: VSTD000.5

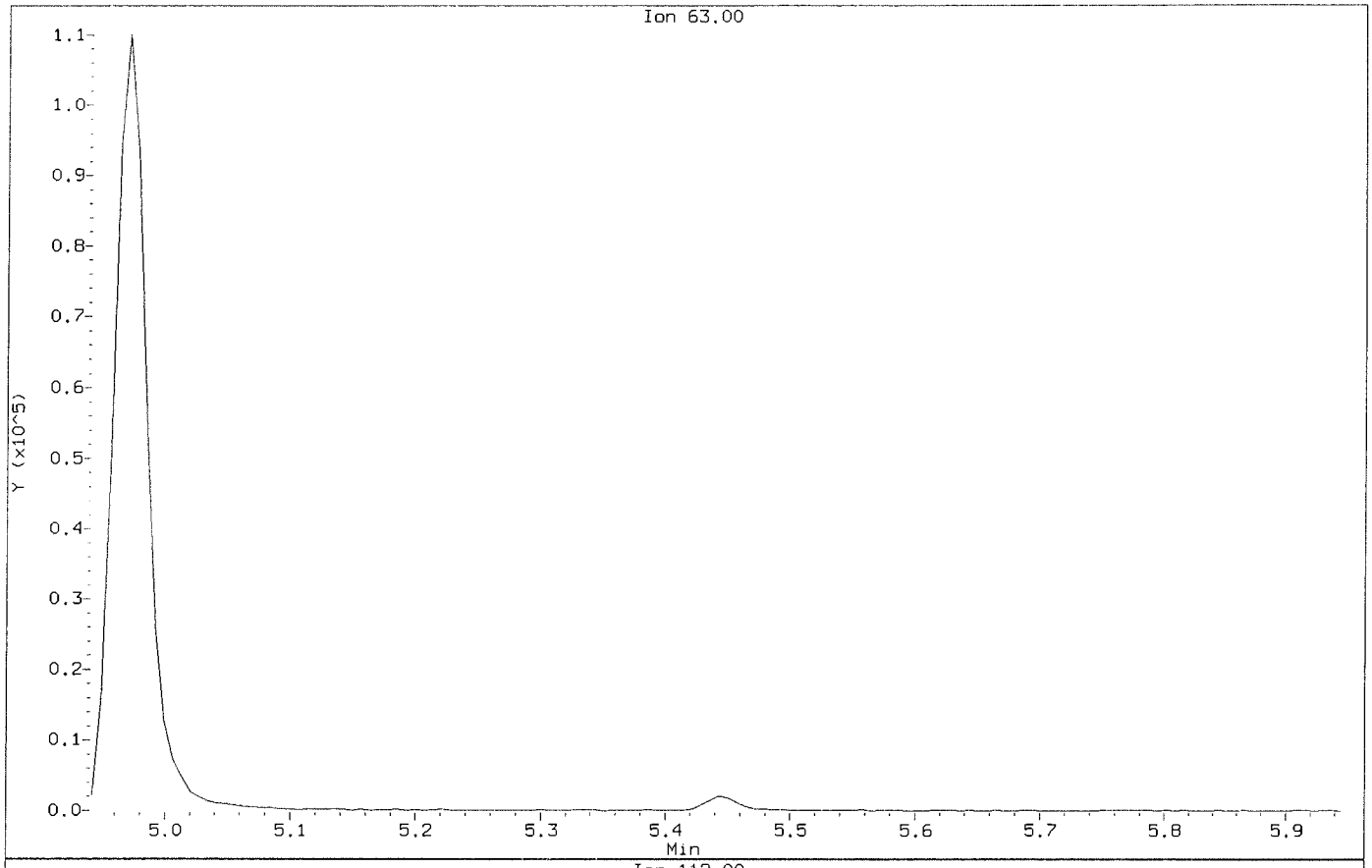
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CAS Number: 107-06-2

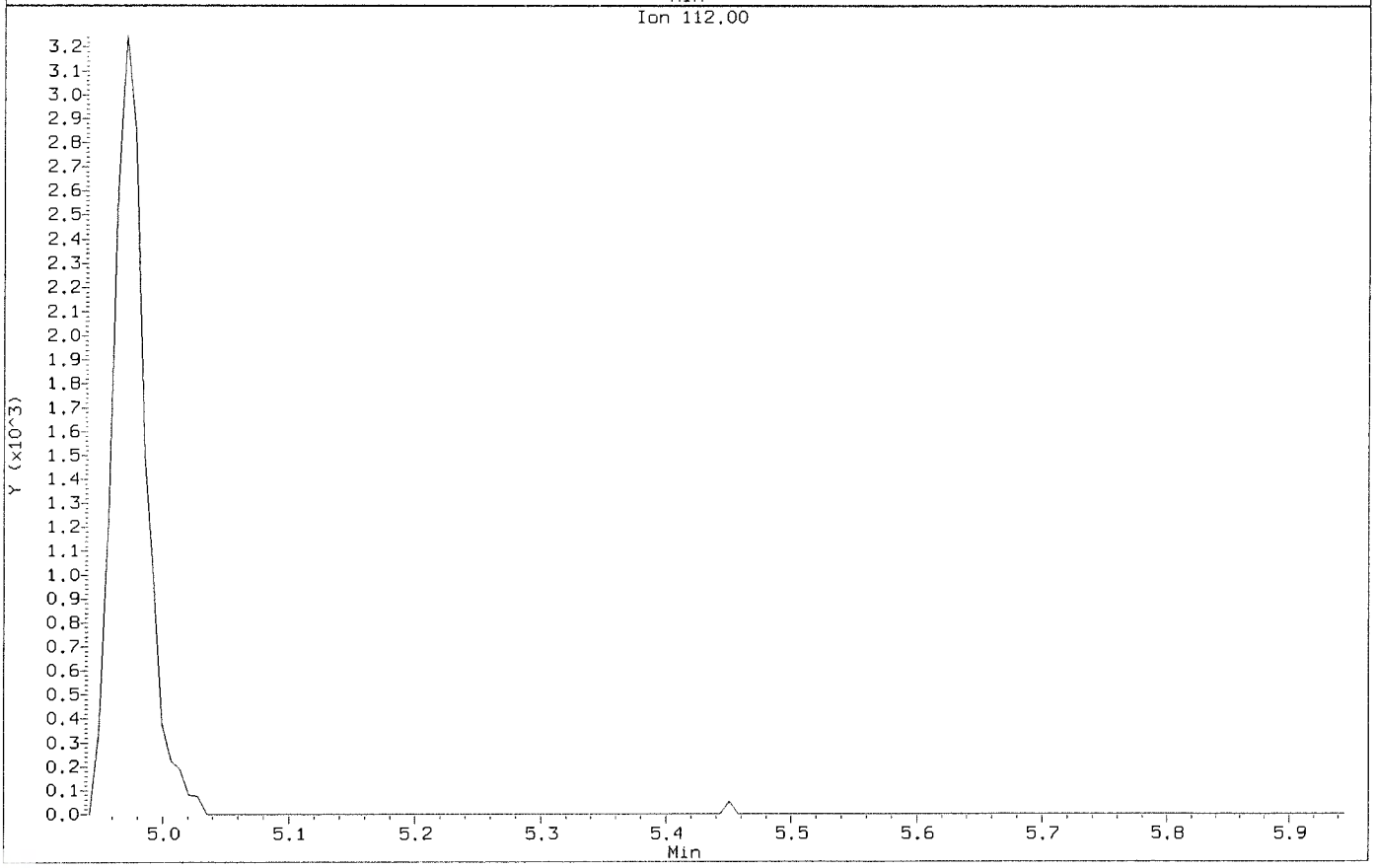




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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

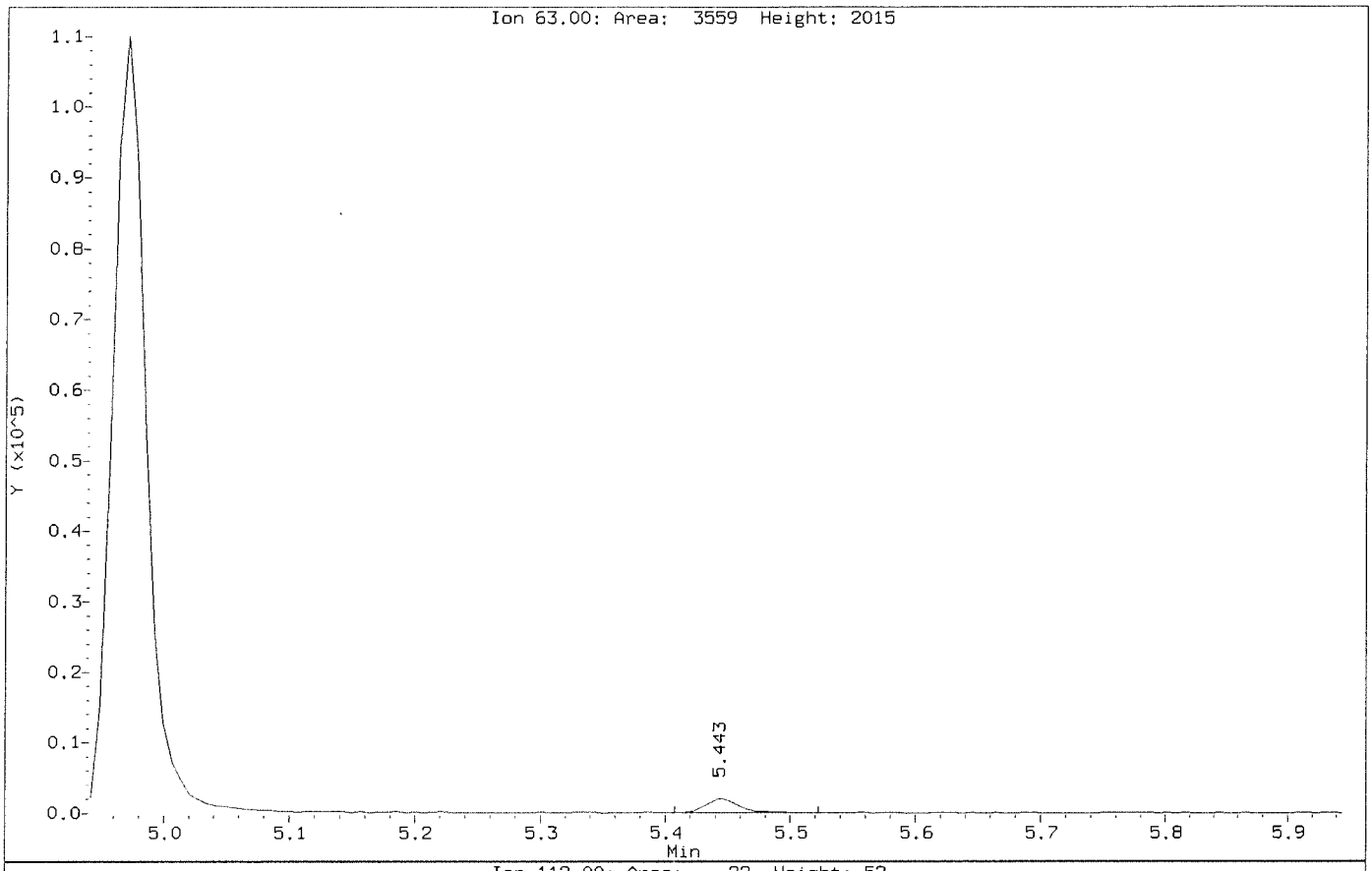
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

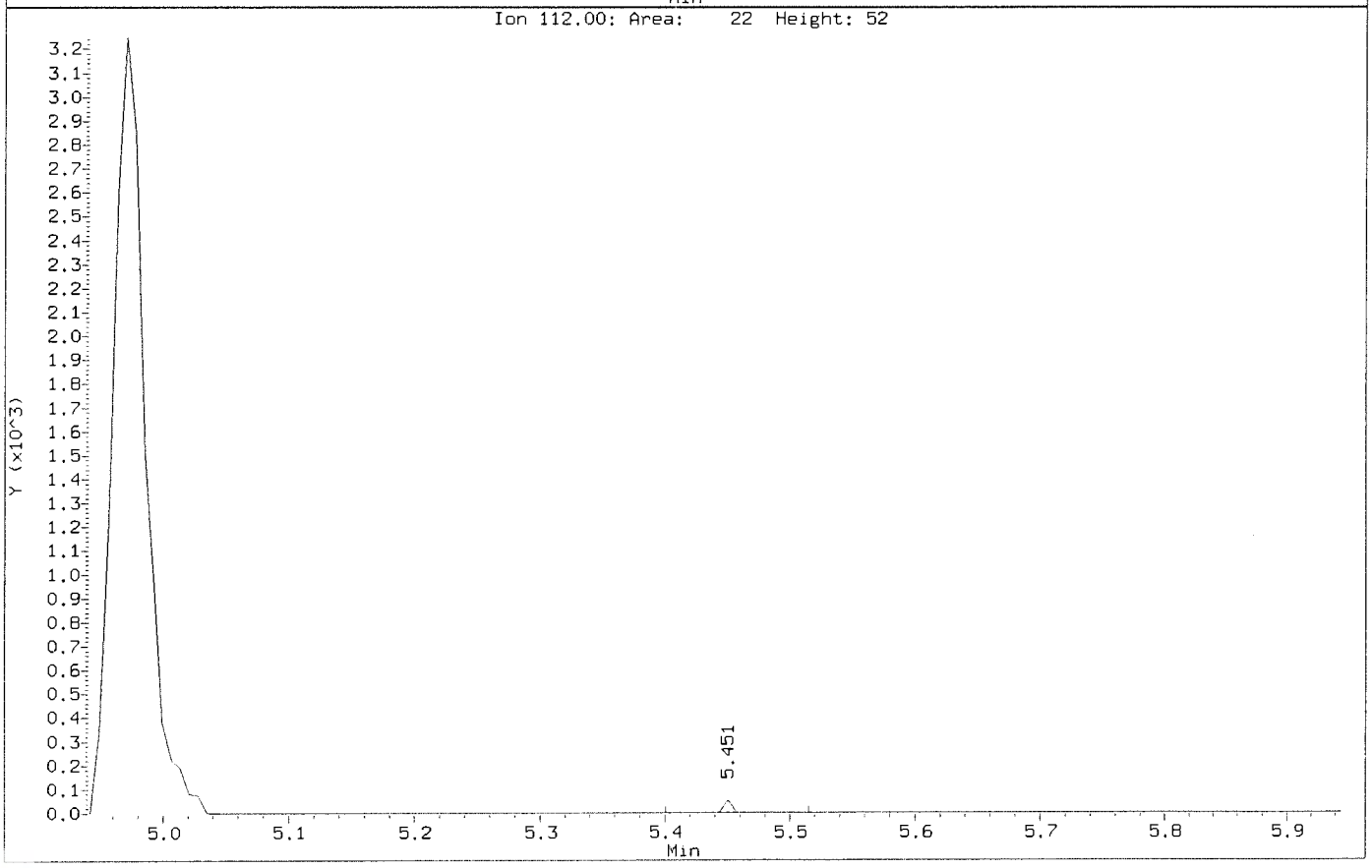




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Instrument: voa6.i
Client Sample ID: VSTD000.5

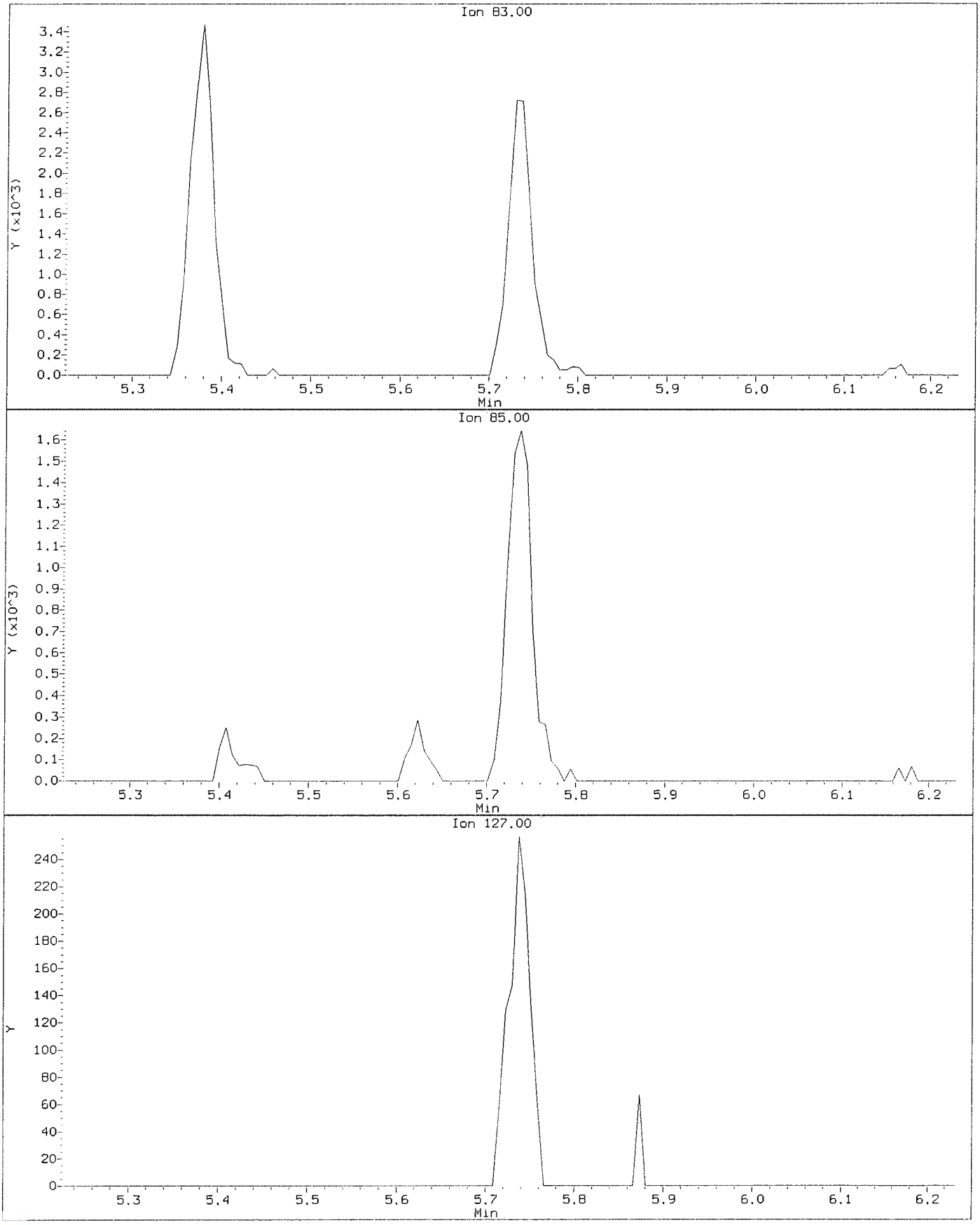
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





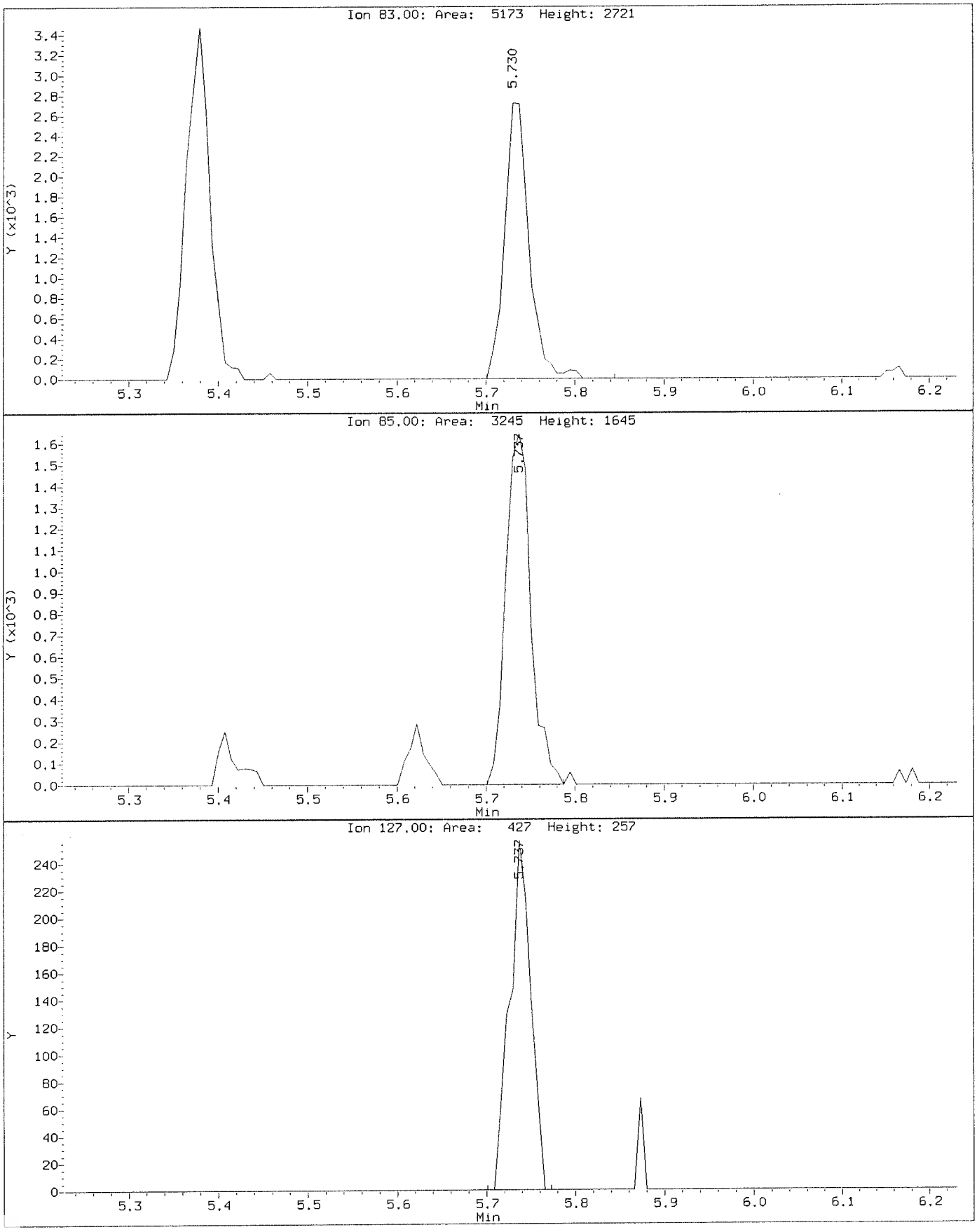
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



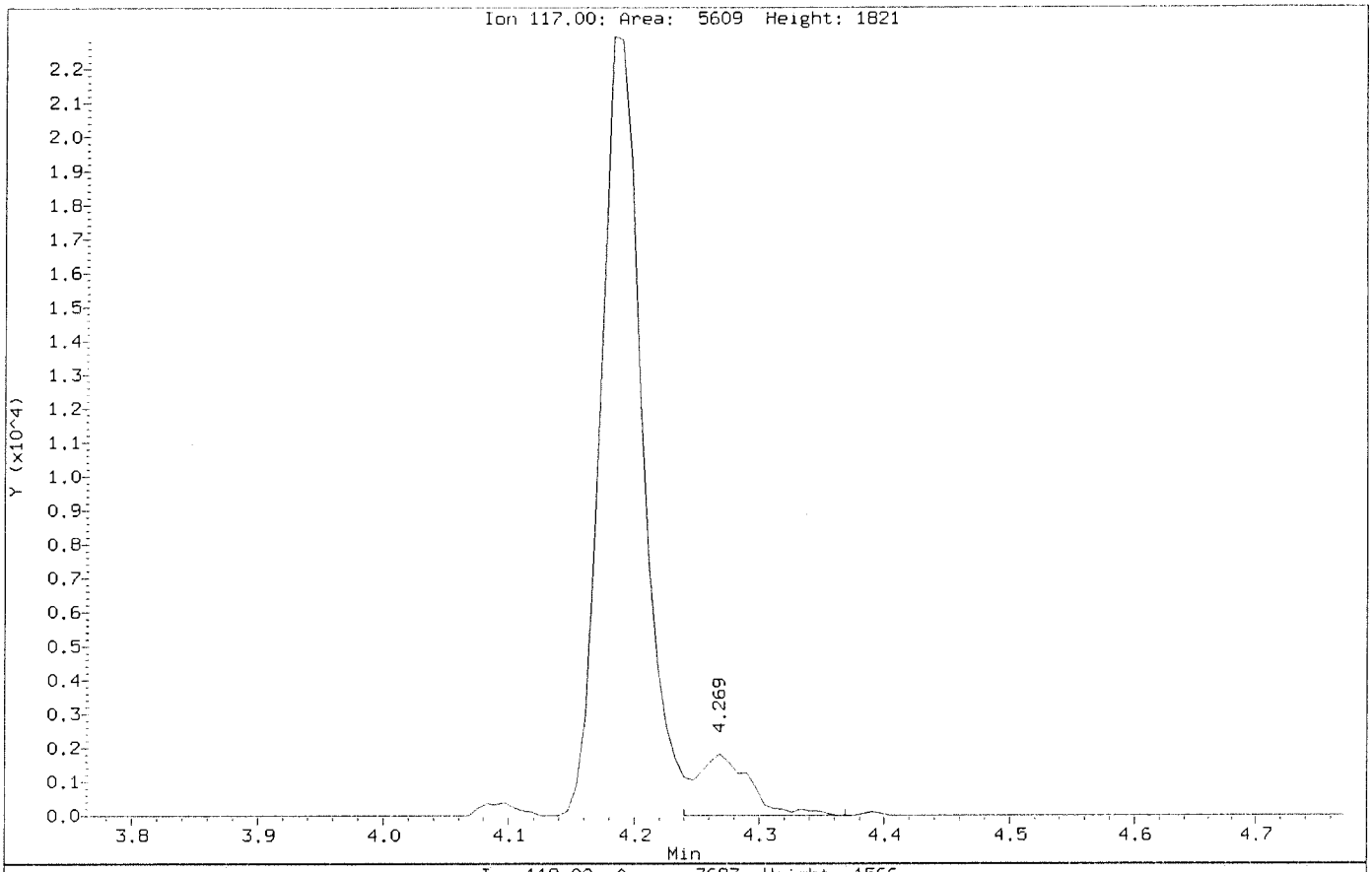
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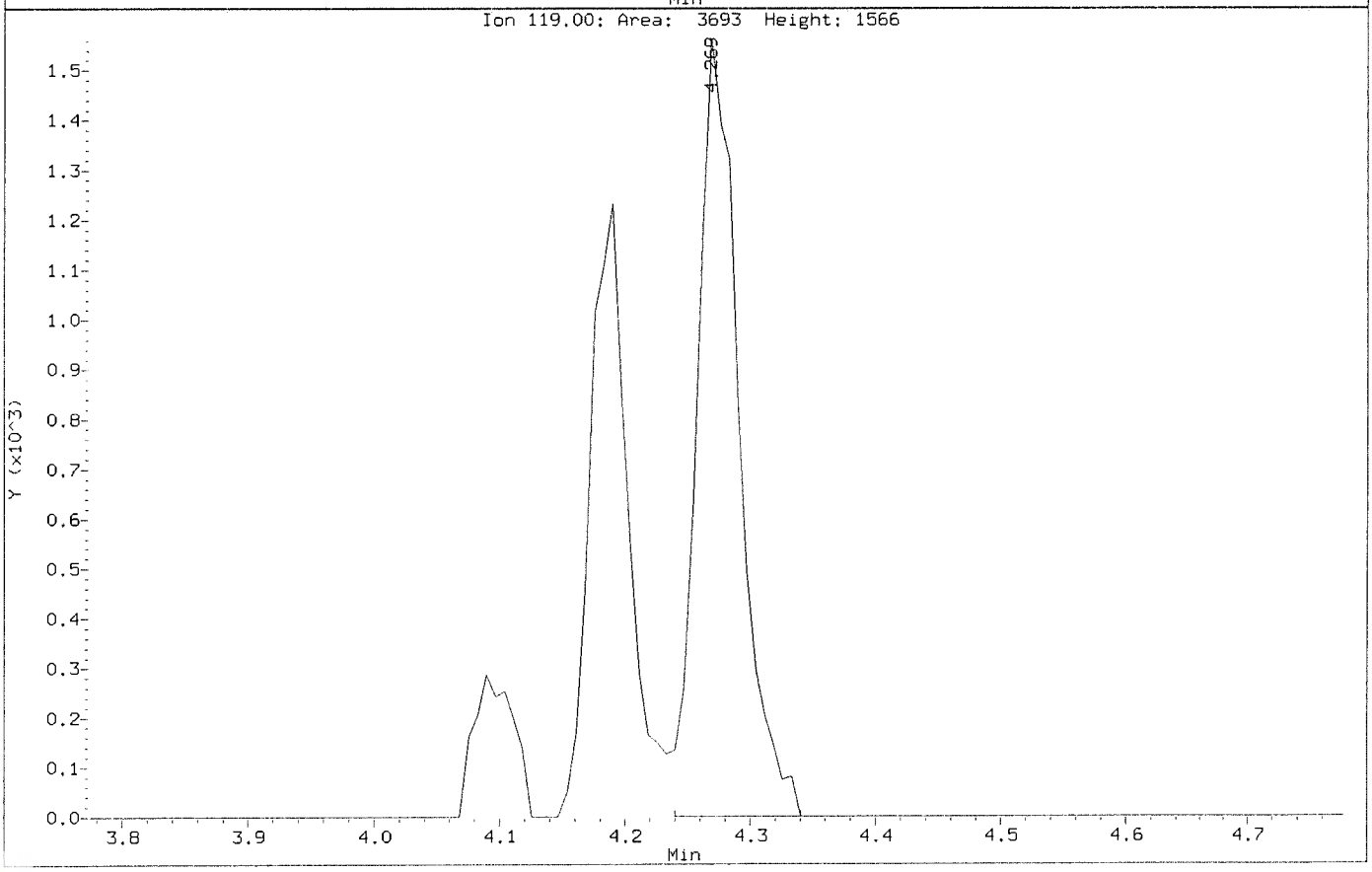
Compound: Bromodichloromethane
CAS Number: 75-27-4



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Instrument: voa6.i
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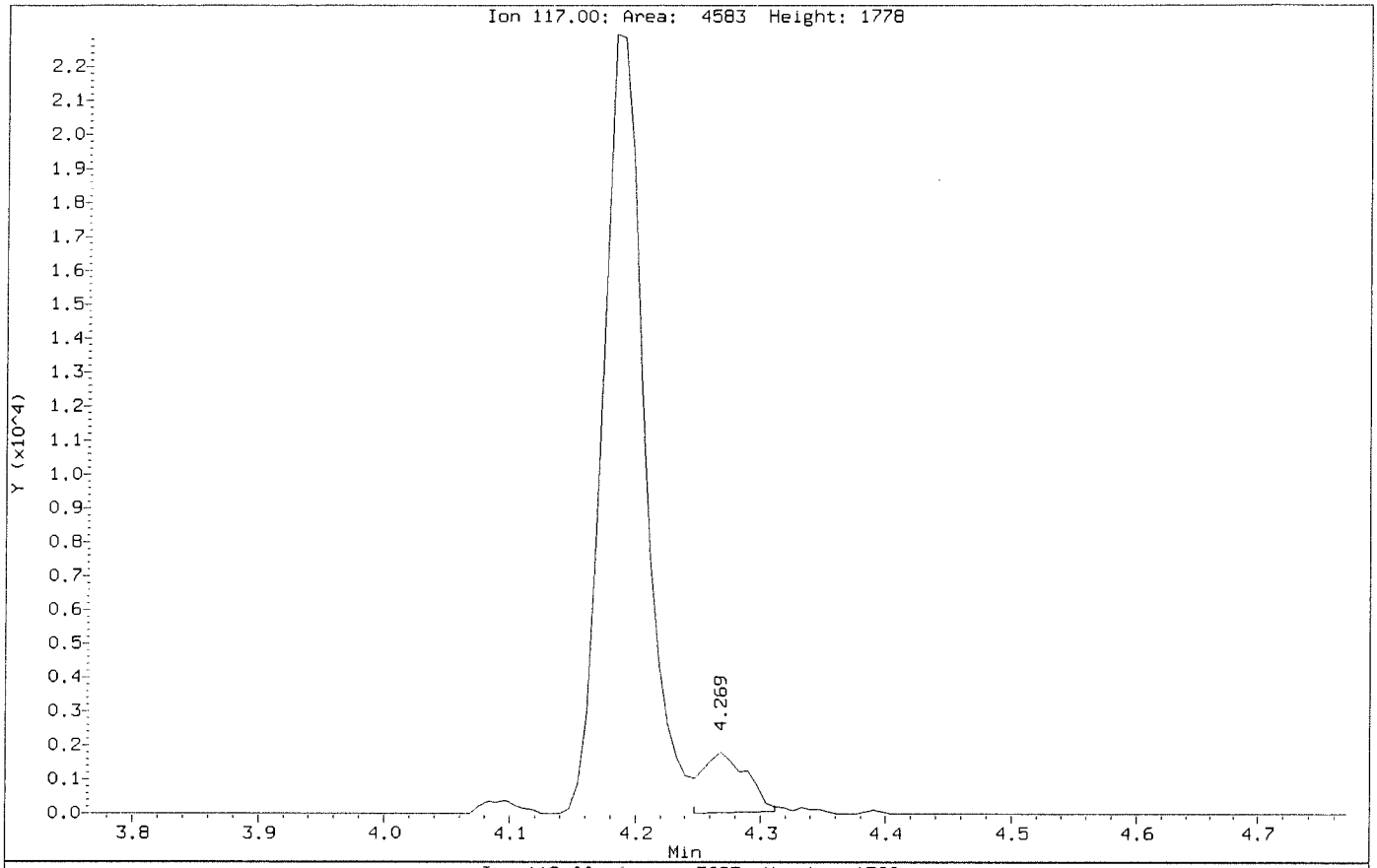
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

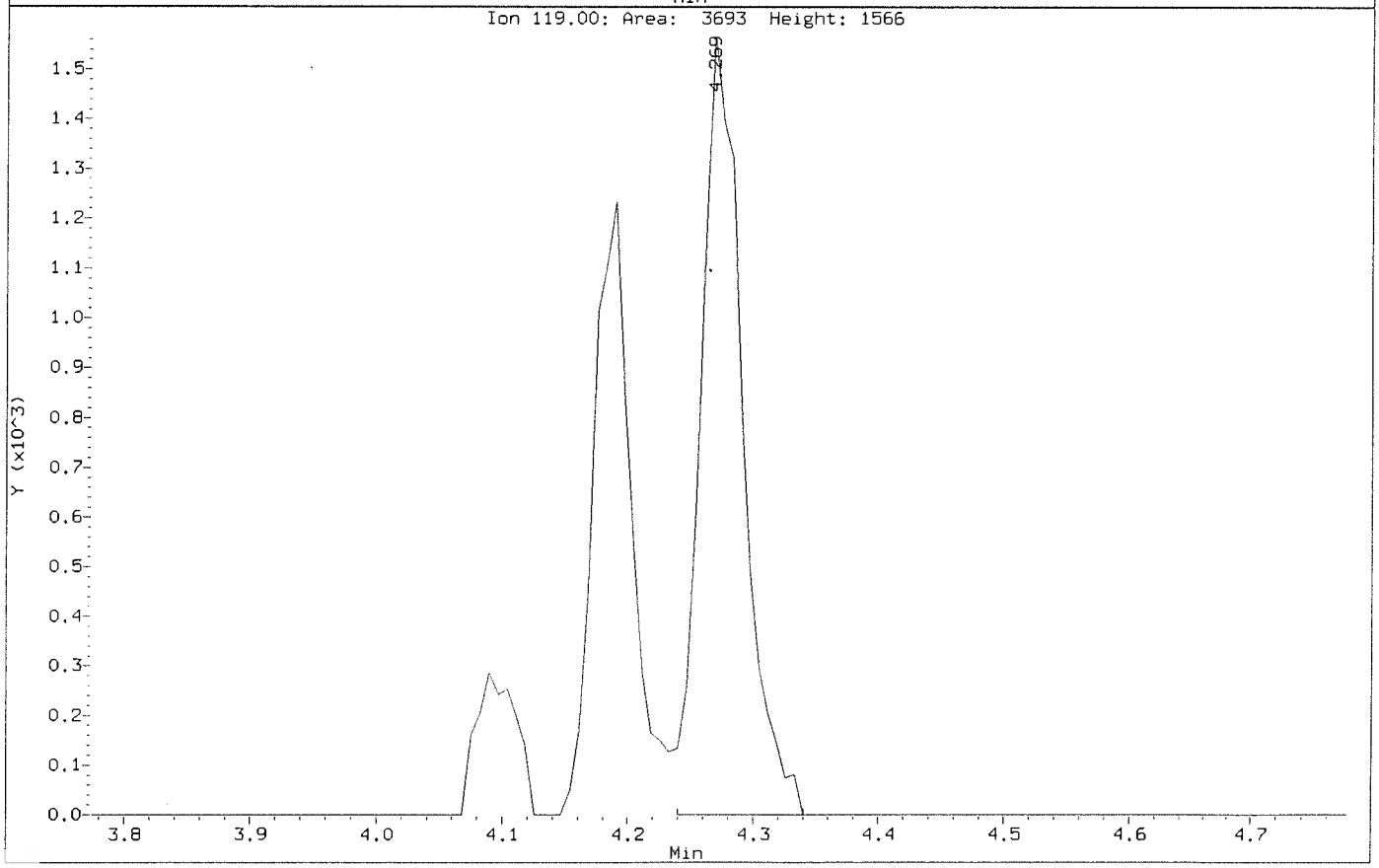




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Instrument: voa6.i
Client Sample ID: VSTD000.5

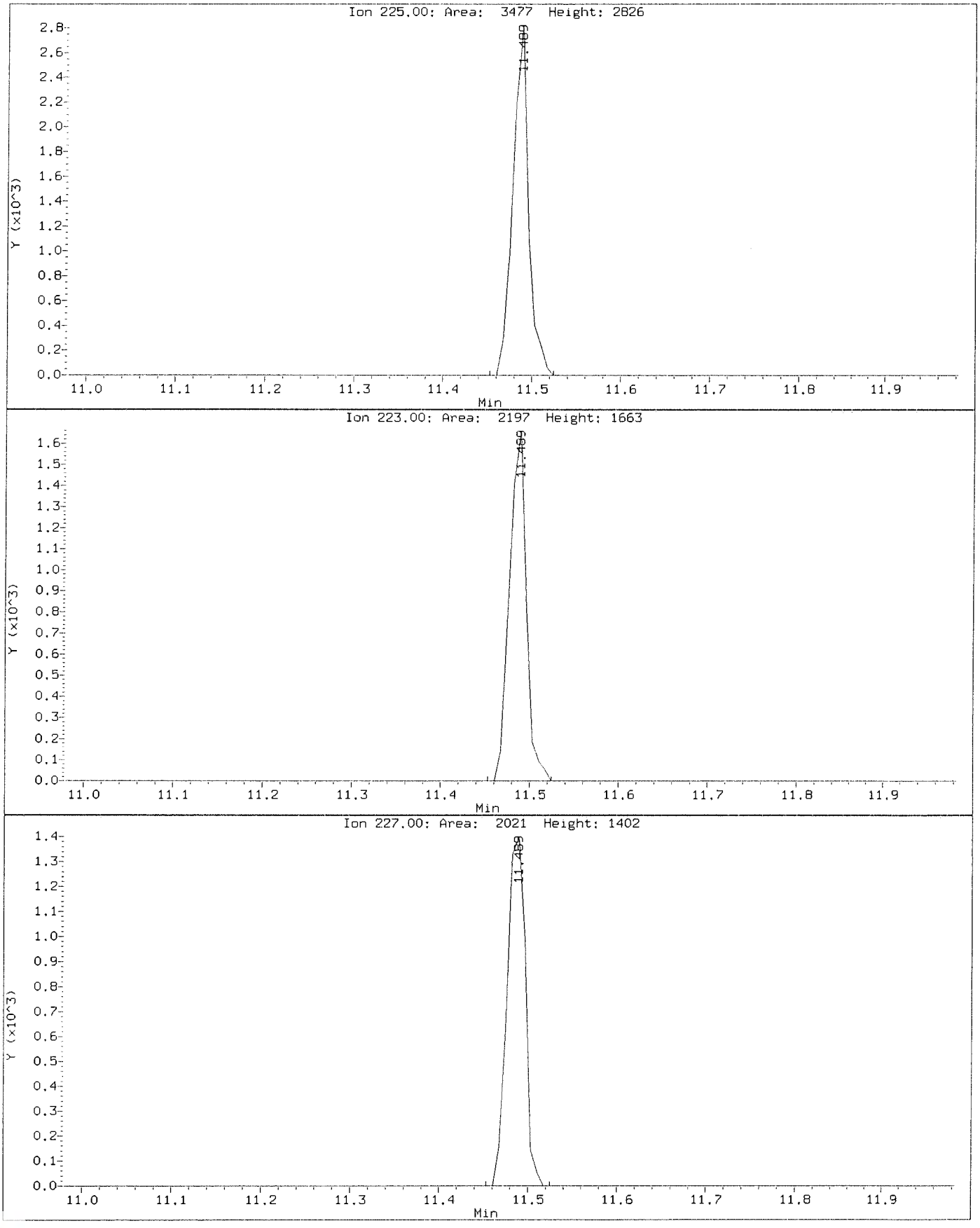
Compound: Carbon Tetrachloride
CAS Number: 56-23-5





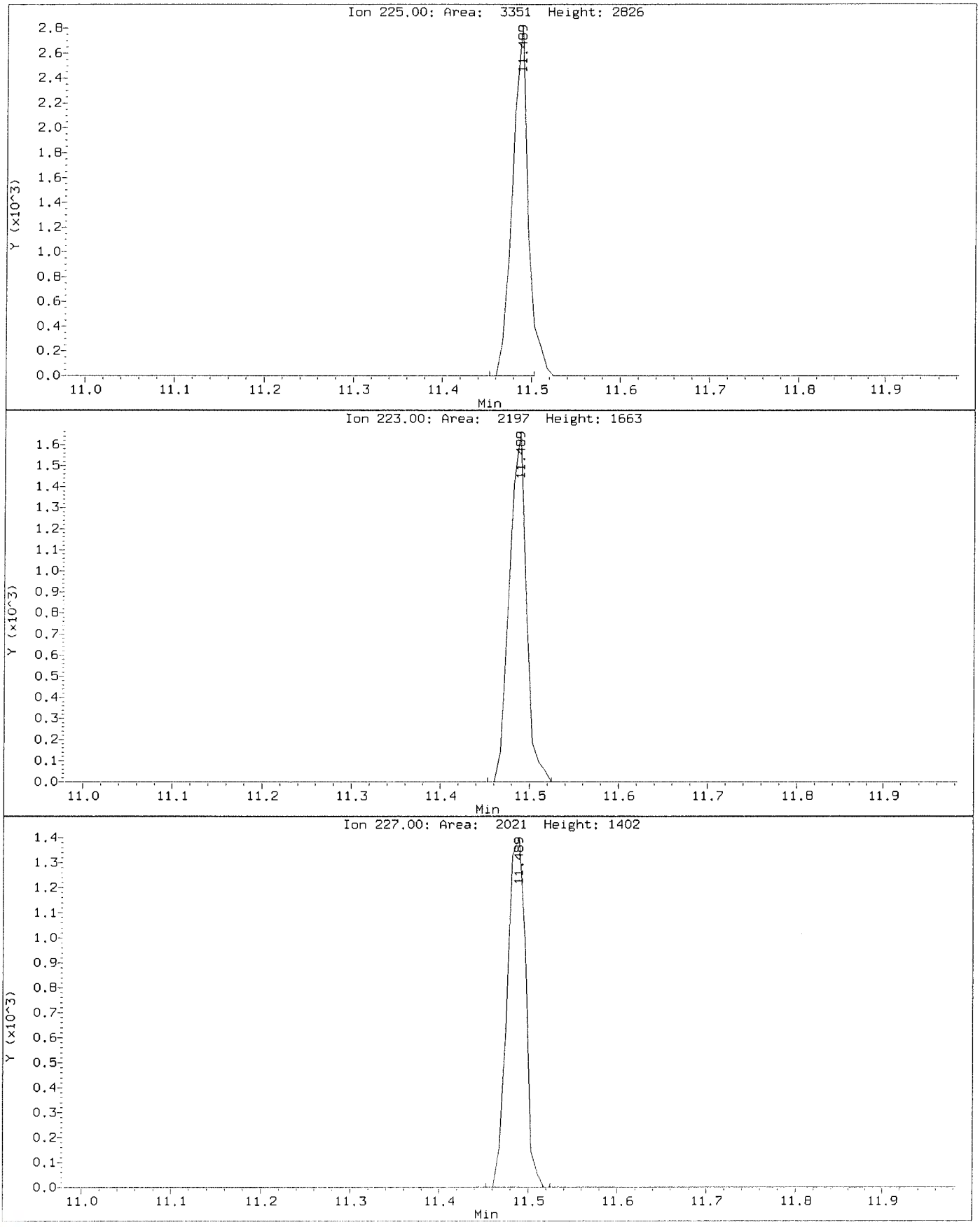
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



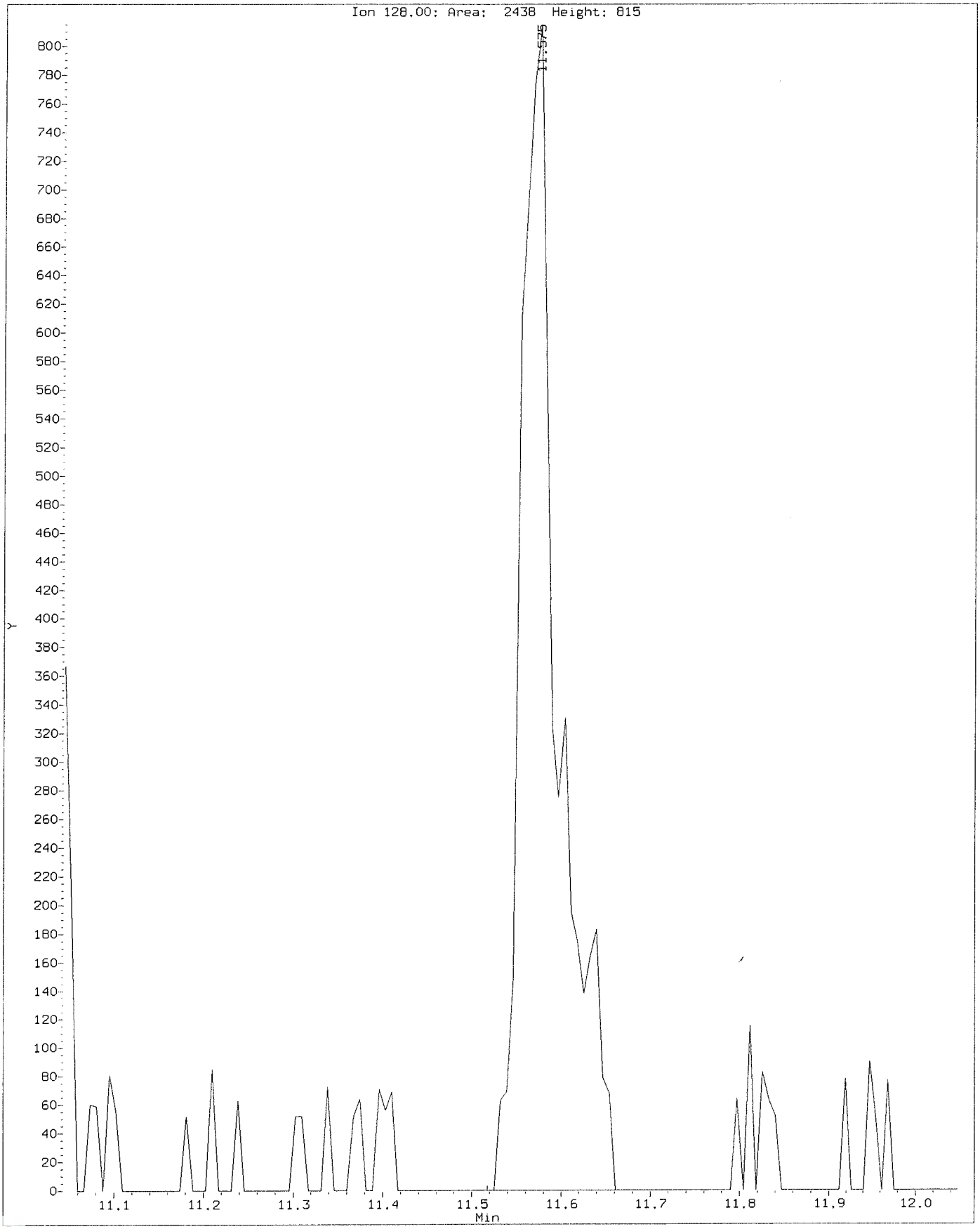
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Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



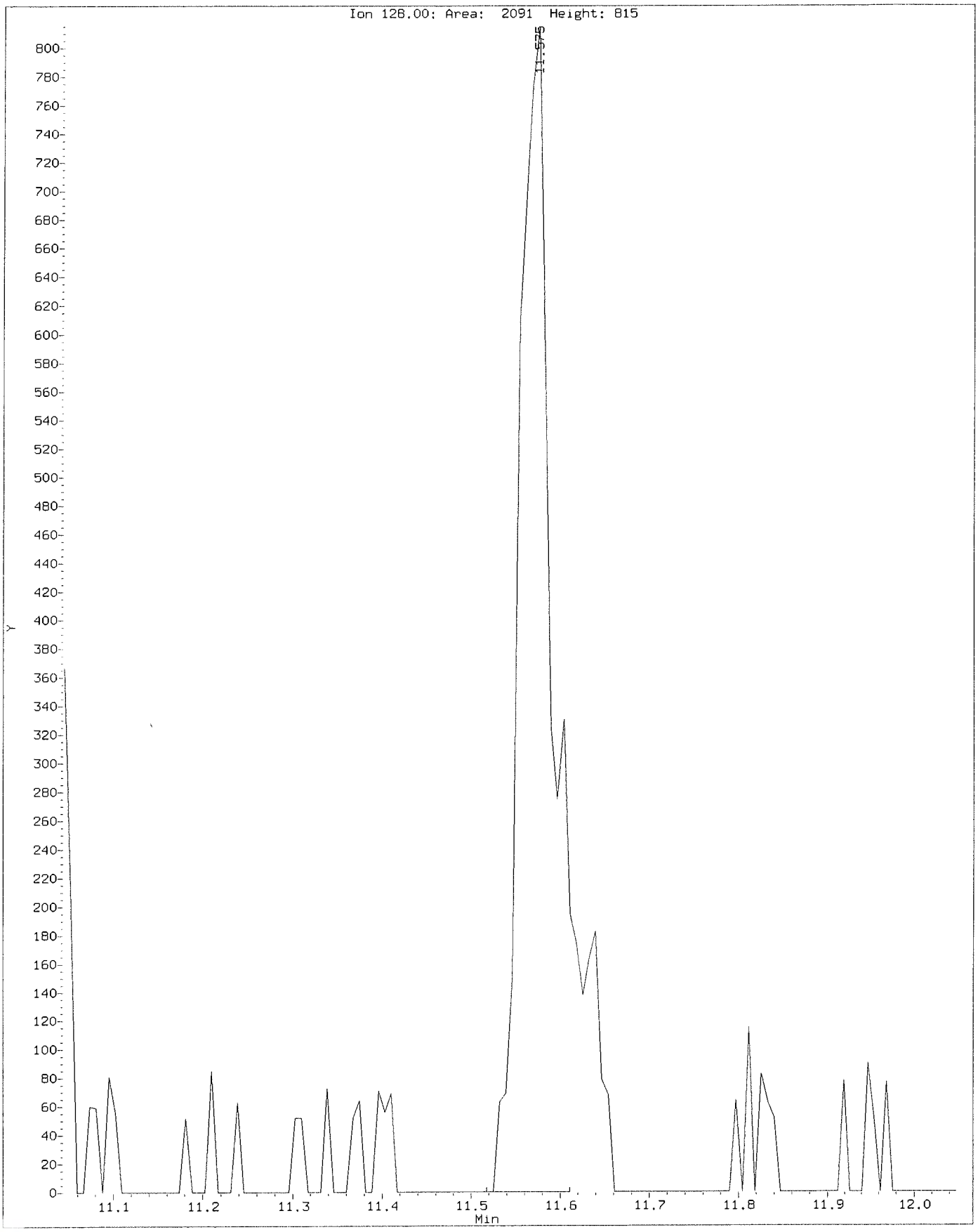
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092403.D
Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092404.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 24-SEP-2020 12:46
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 11:58 Cal File: X092403.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

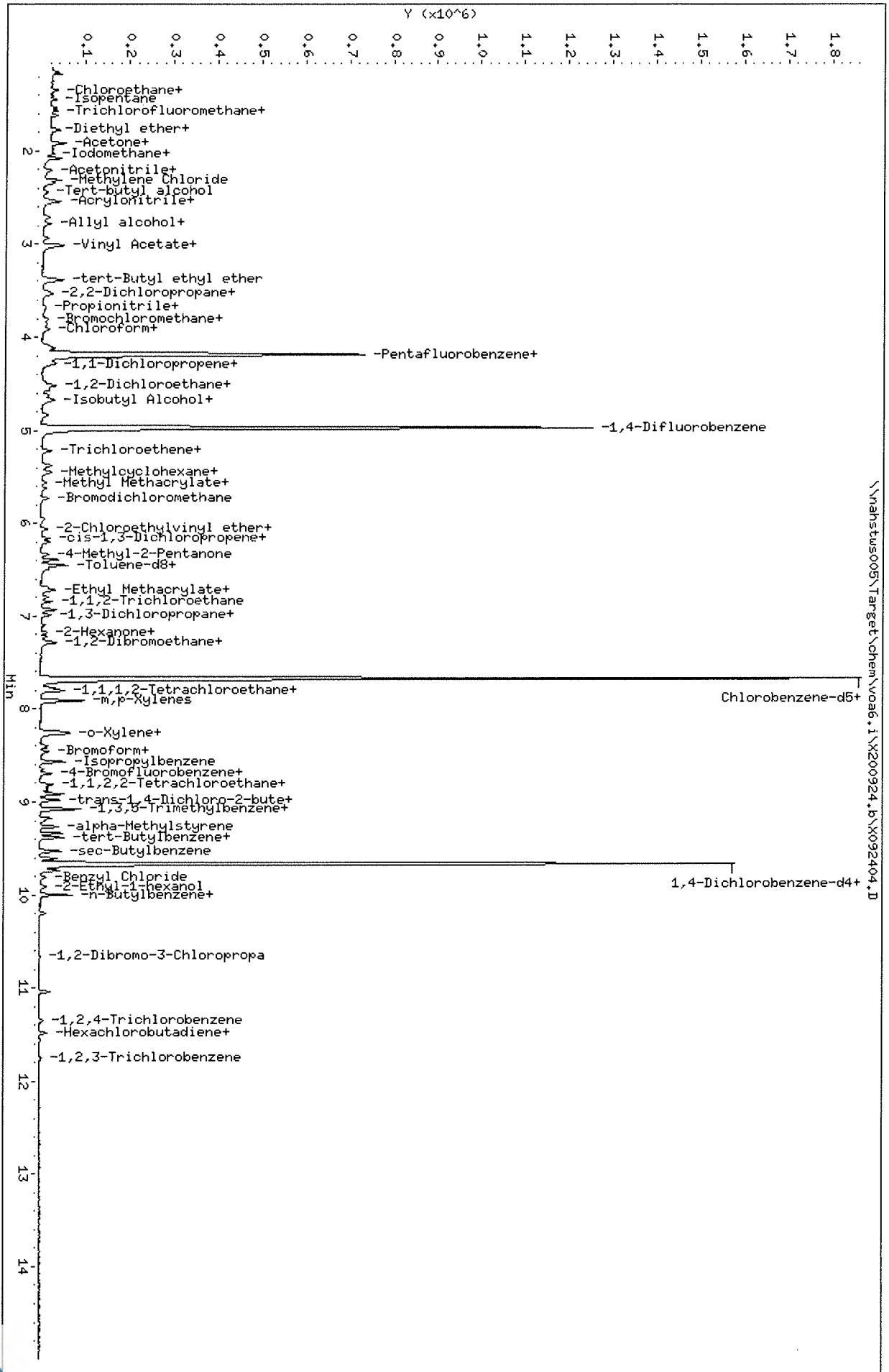
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	632214	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1010972	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	898139	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	383057	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.981)	6507	1.00000	1.00(a)
$ 35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	7341	1.00000	1.03(a)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	24343	1.00000	1.03(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	10018	1.00000	0.47(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	7049	1.00000	1.13(a)
31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	11235	1.00000	1.15(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	8149	1.00000	1.20(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	6343	1.00000	1.19(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	15395	1.00000	1.16(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	6814	1.00000	1.19(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	9757	1.00000	1.04(aM)
93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	1757	1.00000	1.18(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	6651	1.00000	1.18(aM)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	2921	1.00000	2.35(a)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	26280	1.00000	1.15(a)
89 1,2-Dibromo-3-Chloropropane	155	10.672	10.672	(1.104)	597	1.00000	1.29(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	7429	1.00000	1.19(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	12334	1.00000	1.15(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092404.D Page 2
Report Date: 13-Oct-2020 11:23

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	10910	1.00000	1.25(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	8653	1.00000	1.15(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	26381	1.00000	1.16(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	14475	1.00000	1.17(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	13486	1.00000	1.23(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	13966	1.00000	1.14(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	11616	1.00000	1.17(a)
24	2-Butanone	43	3.616	3.616	(0.863)	4126	2.00000	1.78(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	23708	1.00000	1.19(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	7700	2.00000	1.93(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	27312	1.00000	1.20(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	25331	1.00000	1.11(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	13653	2.00000	2.16(a)
10	Acetone	43	1.976	1.976	(0.472)	6768	2.00000	(a)
37	Benzene	78	4.519	4.519	(0.909)	34840	1.00000	1.20(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	9112	1.00000	1.17(a)
29	Bromochloromethane	128	3.803	3.803	(0.908)	4791	1.00000	1.21(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	10203	1.00000	1.11(a)
66	Bromoform	173	8.416	8.416	(1.097)	4274	1.00000	1.08(aM)
6	Bromomethane	94	1.346	1.346	(0.321)	7731	1.00000	1.28(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	46459	2.00000	2.36(a)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	8300	1.00000	1.02(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	22145	1.00000	1.21(a)
7	Chloroethane	64	1.410	1.410	(0.337)	5632	1.00000	1.13(a)
28	Chloroform	83	3.917	3.917	(0.935)	14431	1.00000	1.17(a)
3	Chloromethane	50	1.081	1.081	(0.258)	8974	1.00000	1.03(a)
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	9071	1.00000	1.17(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	12704	1.00000	1.09(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	7560	1.00000	1.17(a)
44	Dibromomethane	93	5.557	5.557	(1.118)	5100	1.00000	1.14(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	6629	1.00000	3.05(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	11569	1.00000	1.21(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	3302	1.00000	2.13(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	32898	1.00000	1.18(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	27318	2.00000	2.38(a)
17	Methylene Chloride	84	2.313	2.313	(0.552)	9684	1.00000	0.71(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	22581	1.00000	1.14(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	37045	1.00000	1.13(a)
92	Naphthalene	128	11.560	11.560	(1.196)	3645	1.00000	1.02(a)
63	o-Xylene	106	8.251	8.251	(1.076)	13335	1.00000	1.19(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	30538	1.00000	1.14(a)
64	Styrene	104	8.265	8.265	(1.078)	21938	1.00000	1.14(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	22282	1.00000	1.18(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	6913	1.00000	1.21(a)
50	Toluene	91	6.453	6.453	(0.841)	34881	1.00000	1.19(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	7431	1.00000	1.13(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	11002	1.00000	1.13(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	8381	1.00000	1.15(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	10504	1.00000	1.14(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	9143	1.00000	1.11(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

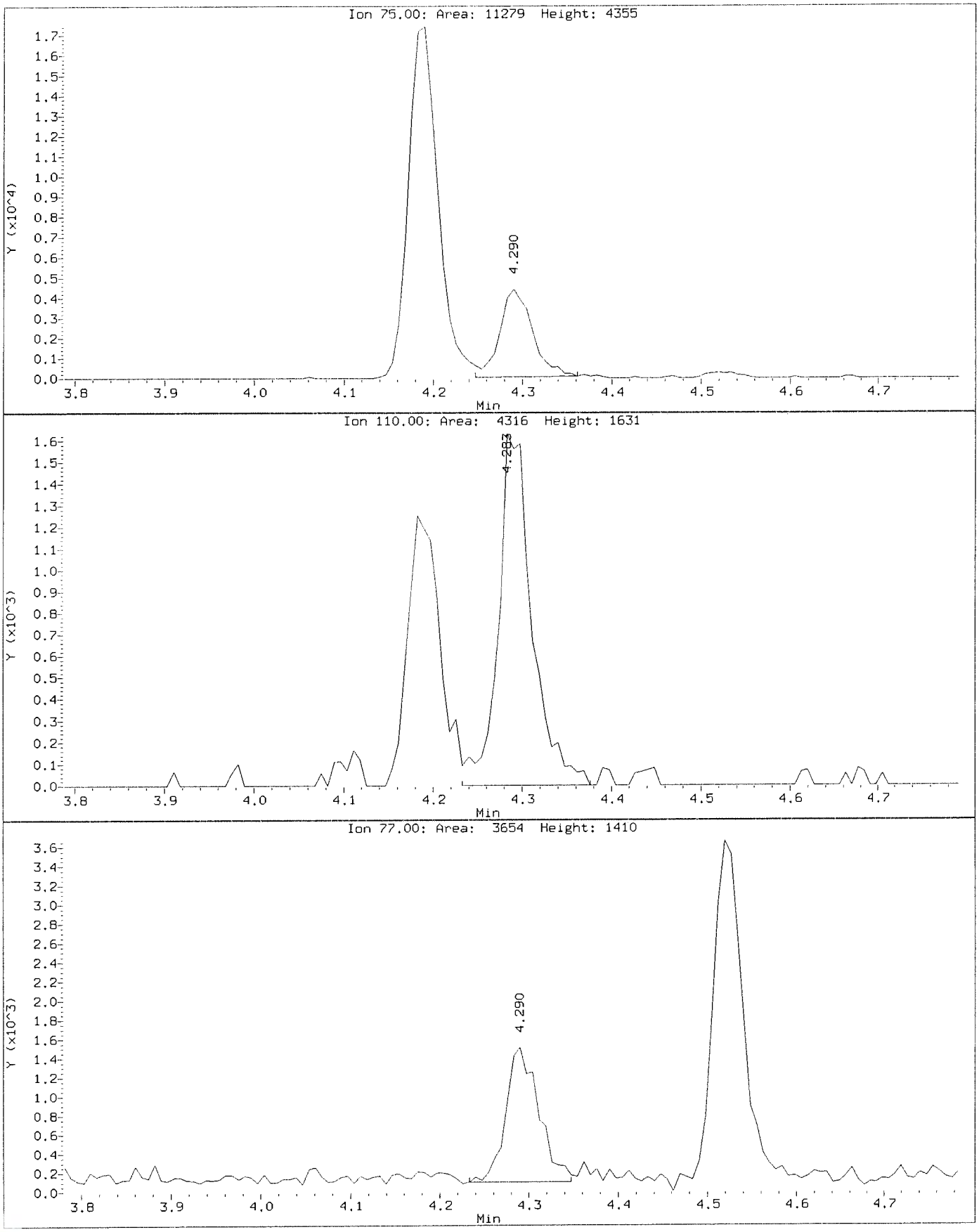


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Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

\\nahstws005\Target\chem\voa6.i\X200924.b\X092404.D
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

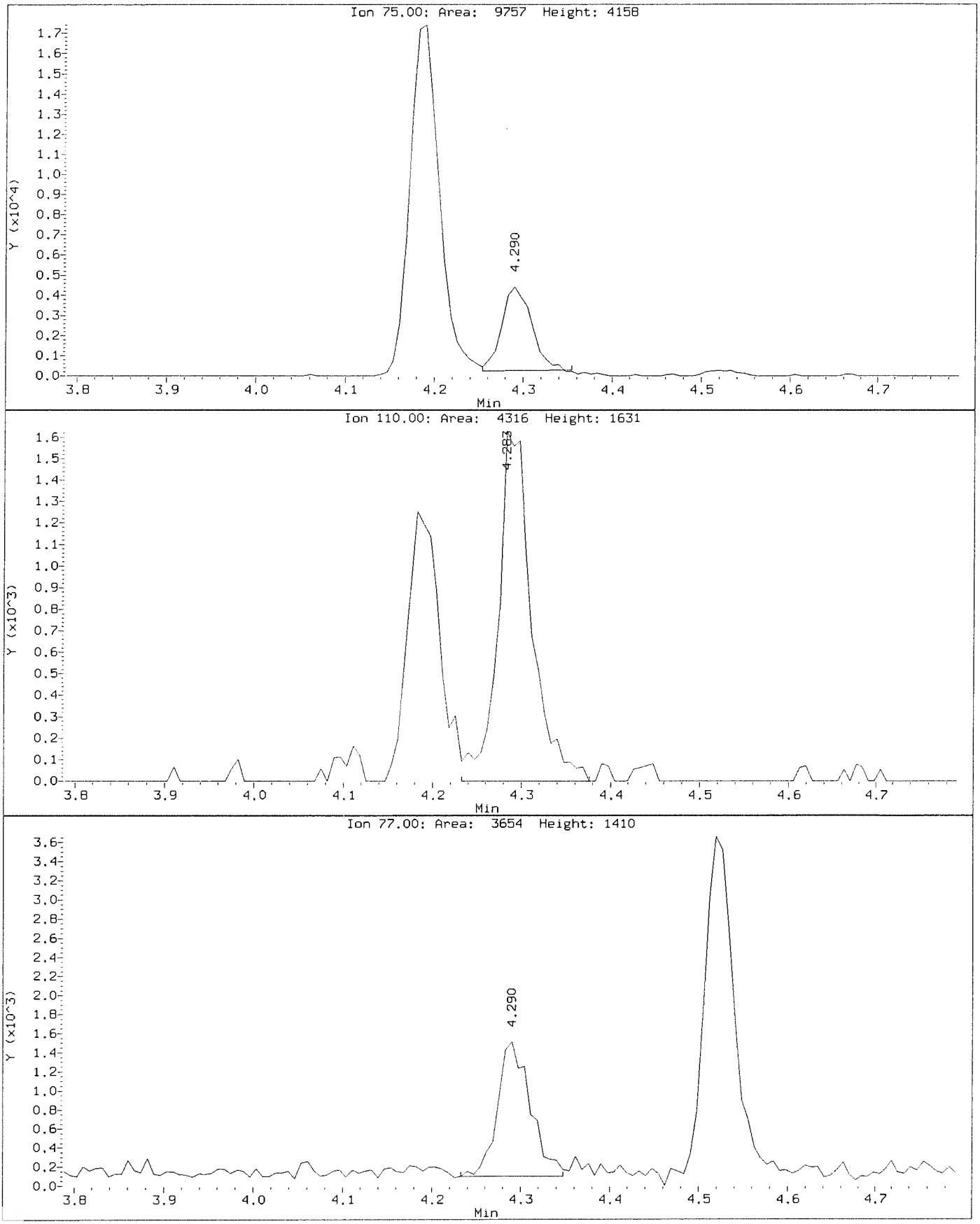
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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



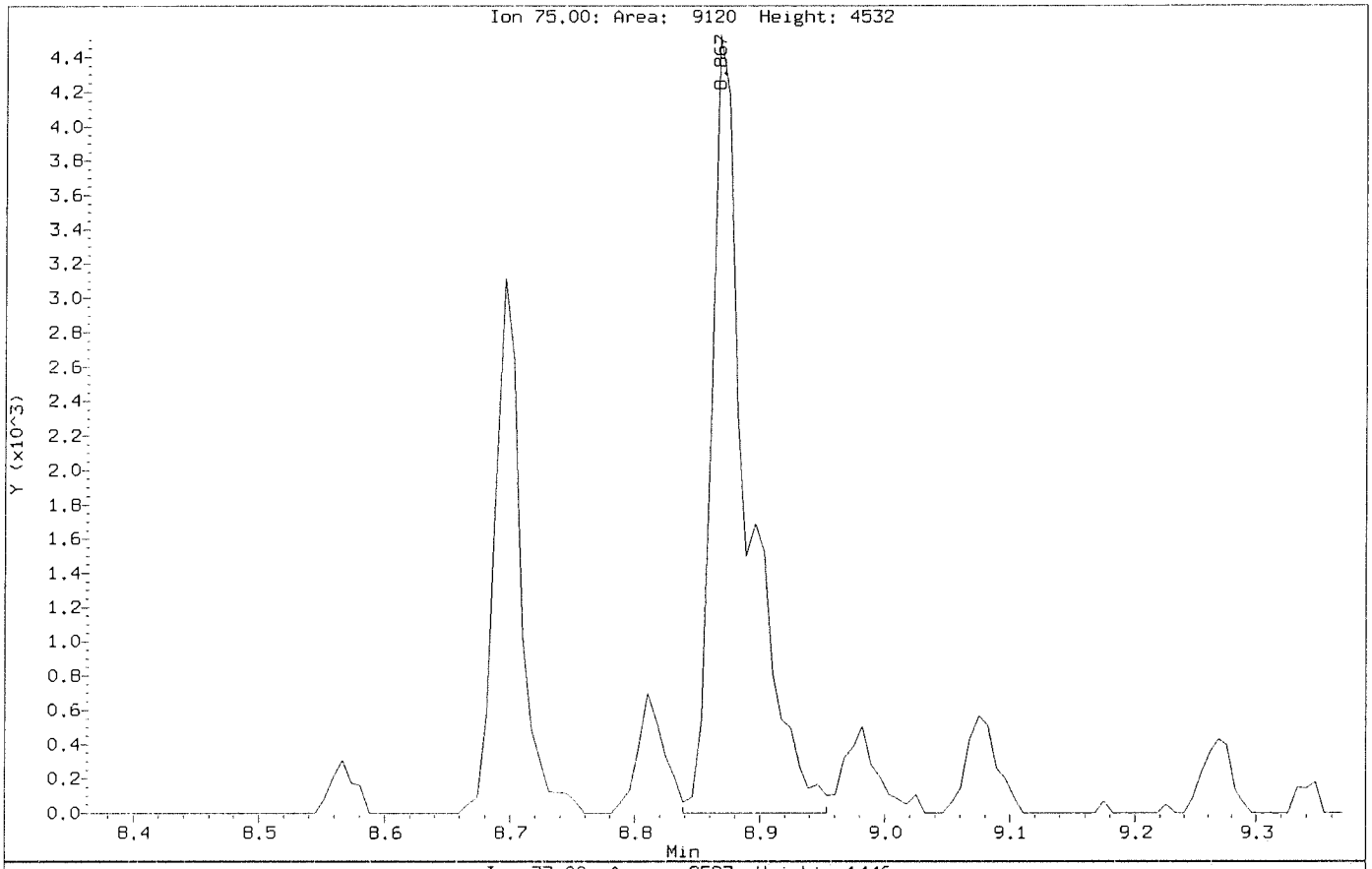
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Client Sample ID: VSTD001

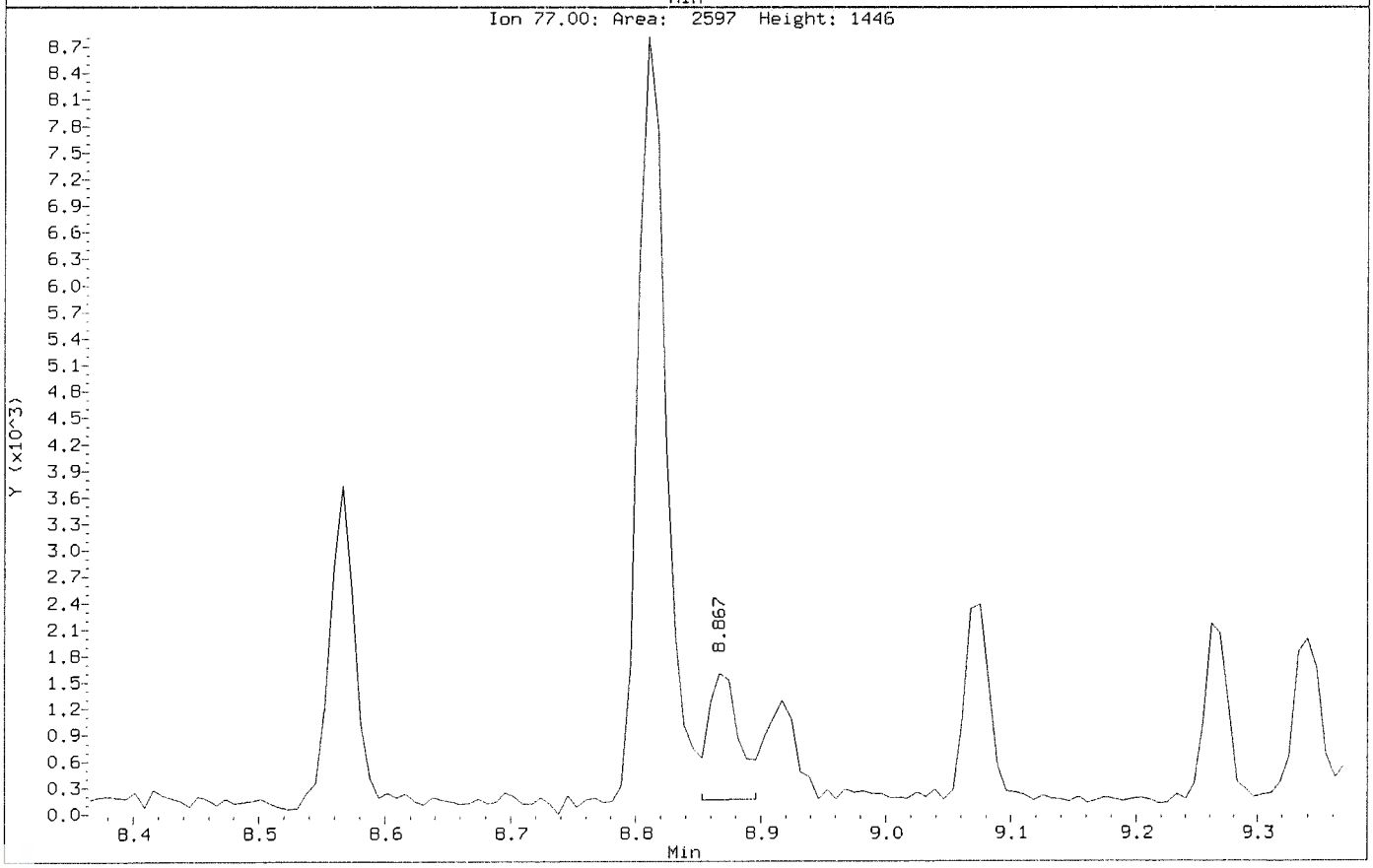
Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092404.D
Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

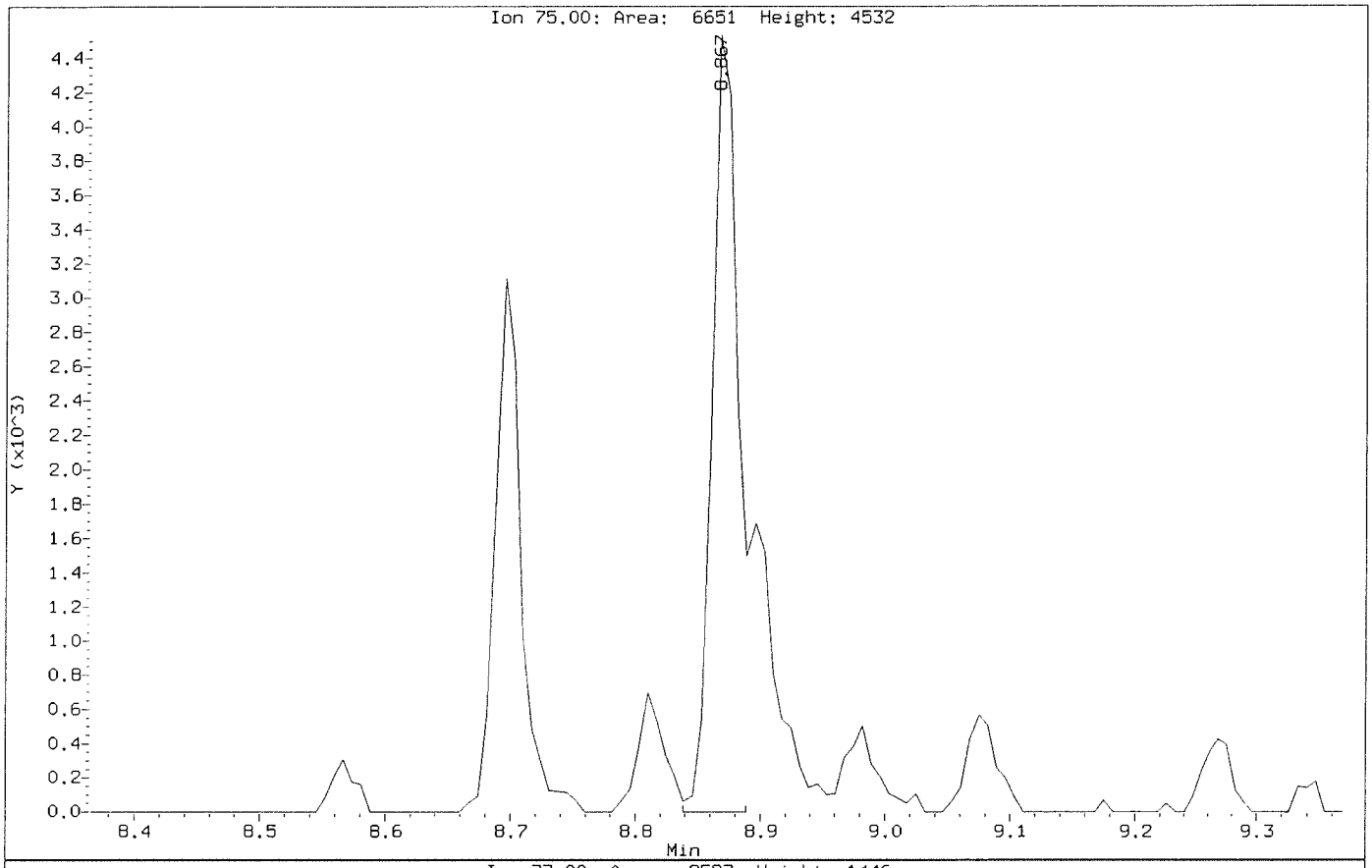
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

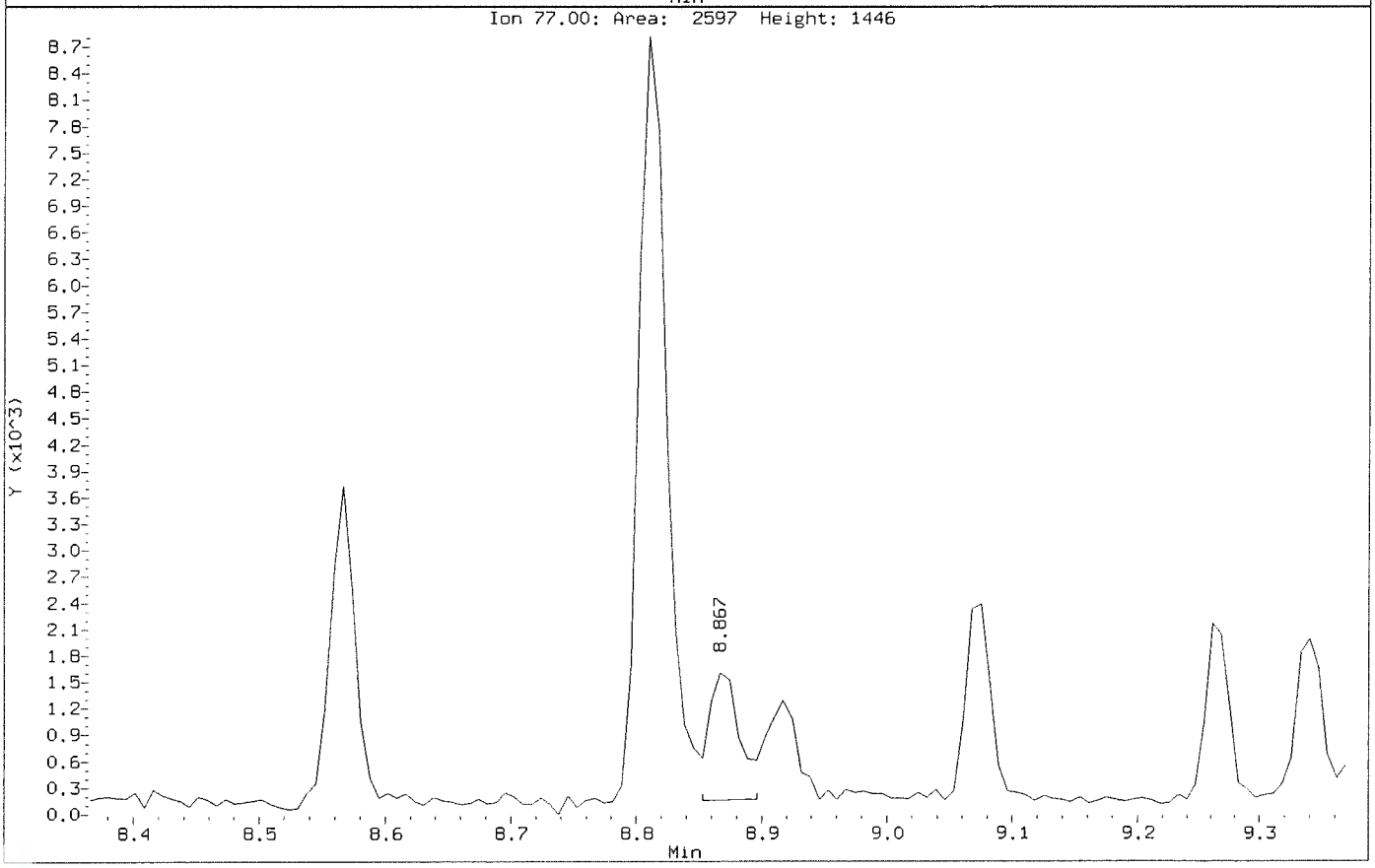




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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

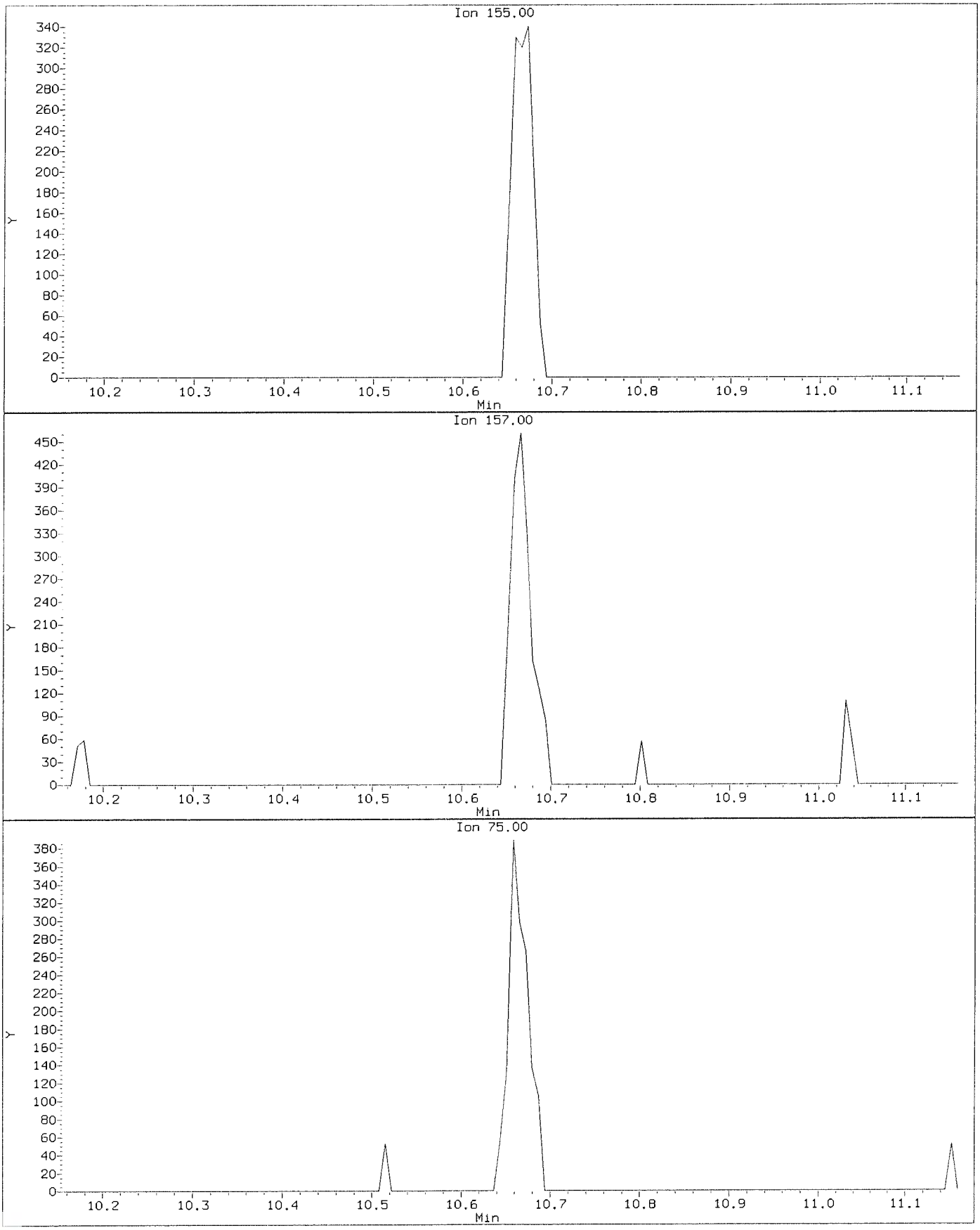
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





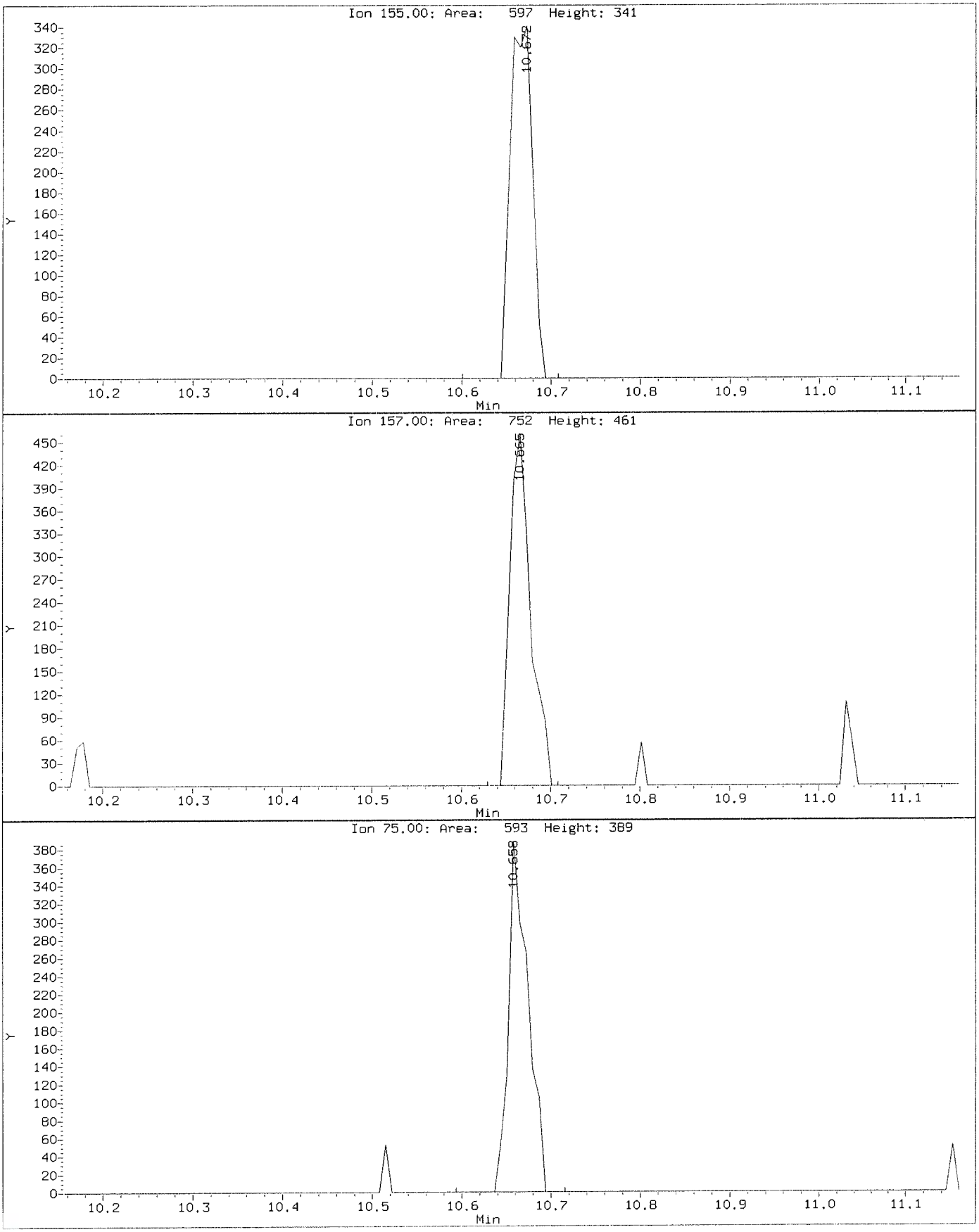
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



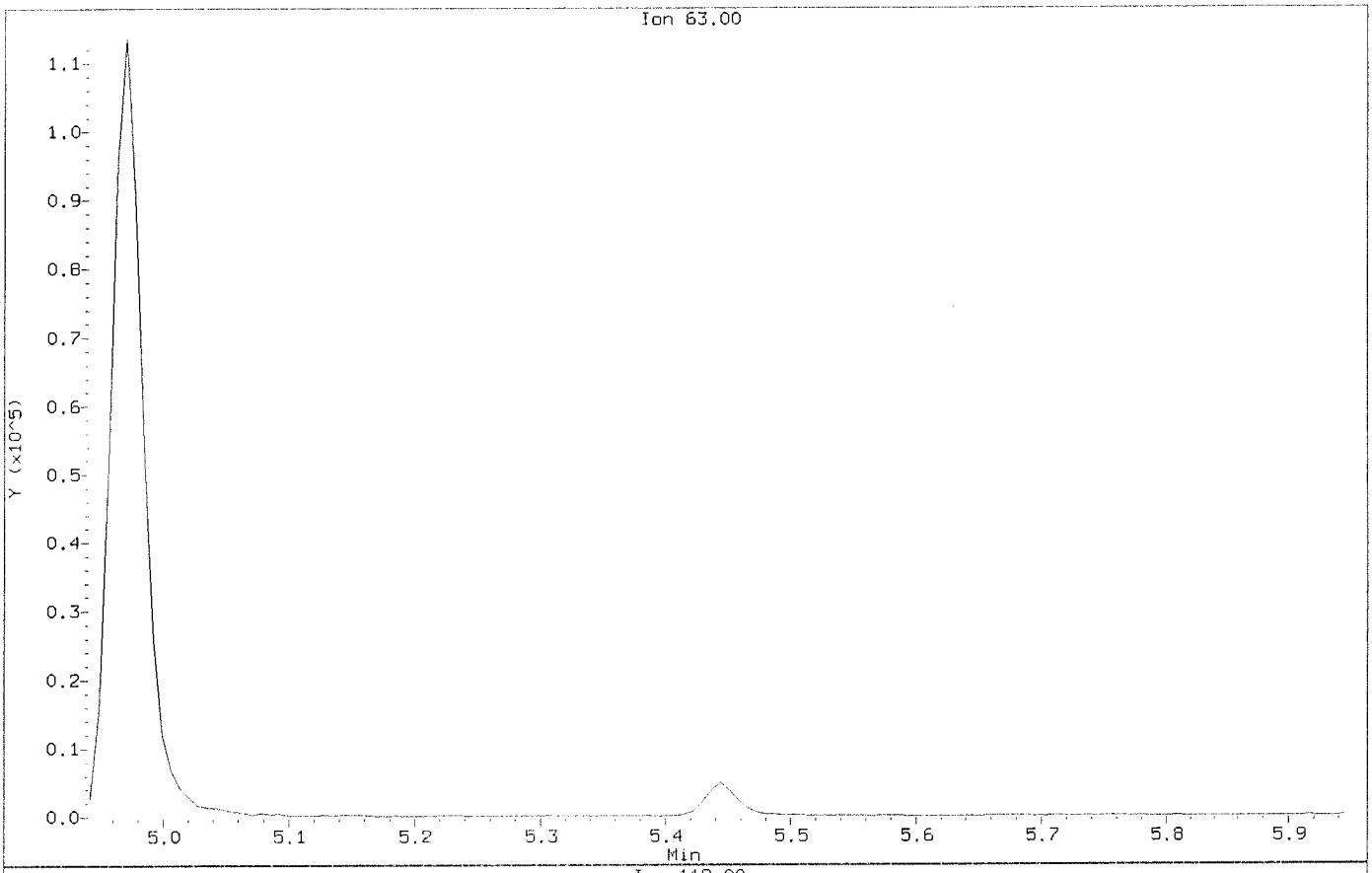
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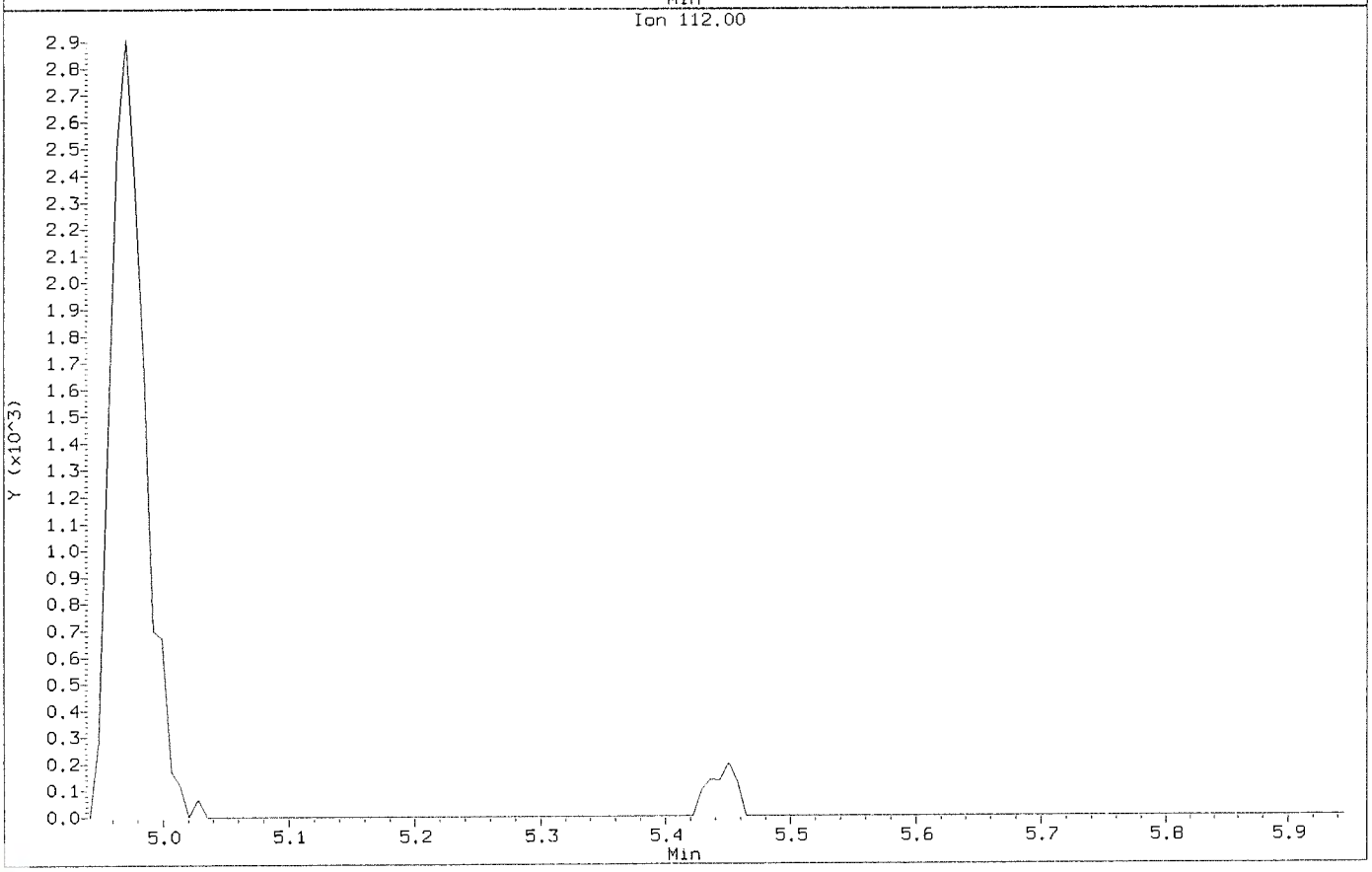
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Instrument: voa6.i
Client Sample ID: VSTD001

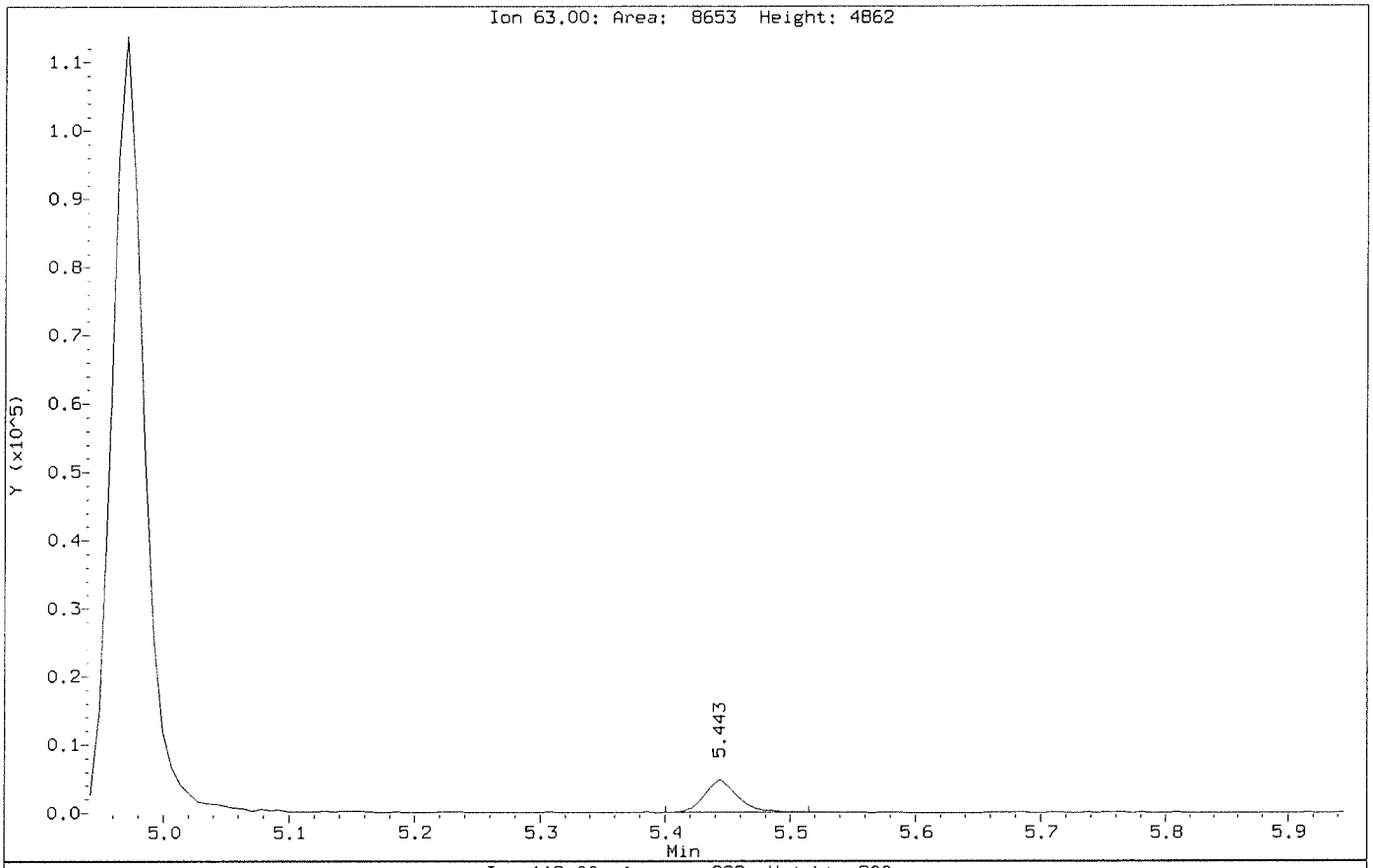
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

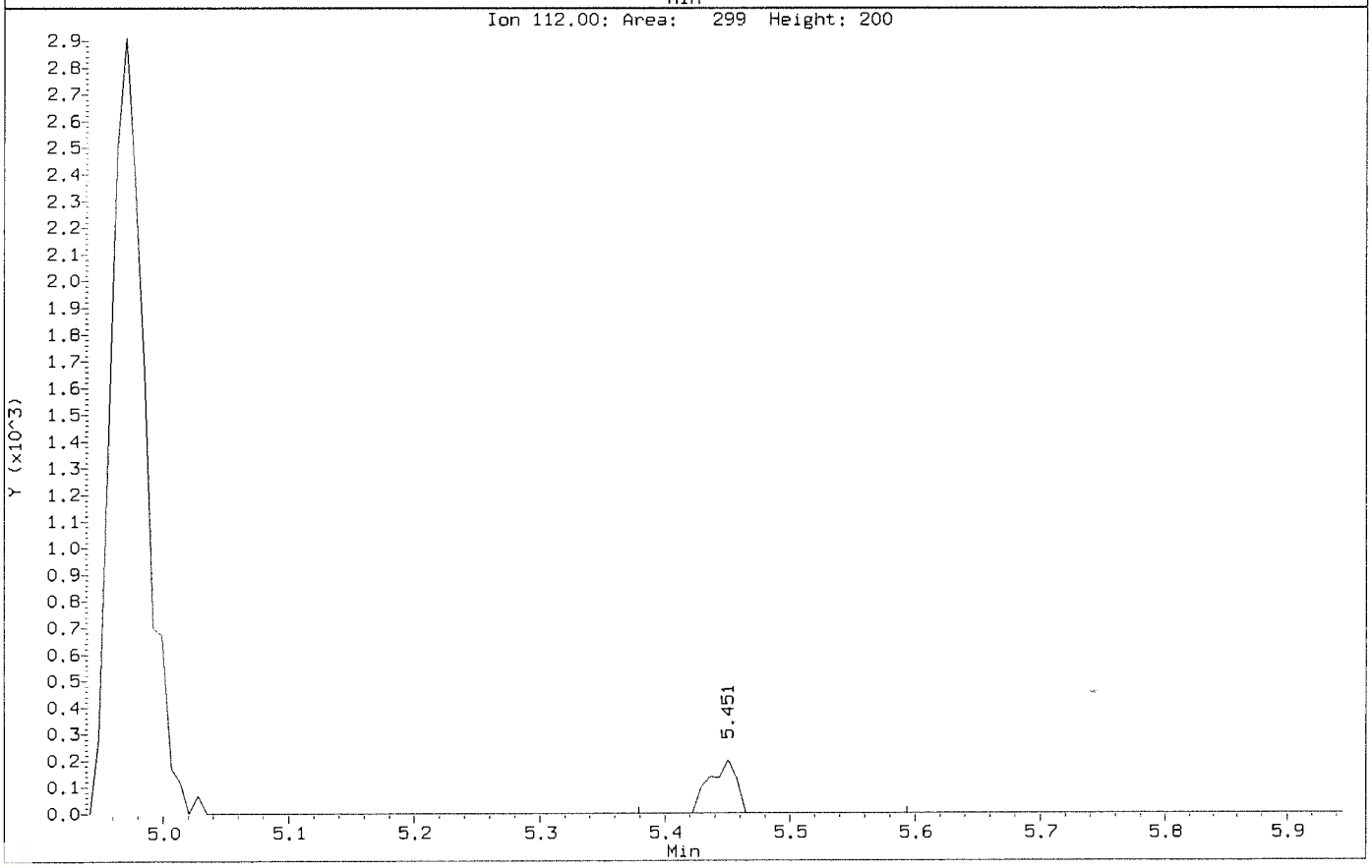




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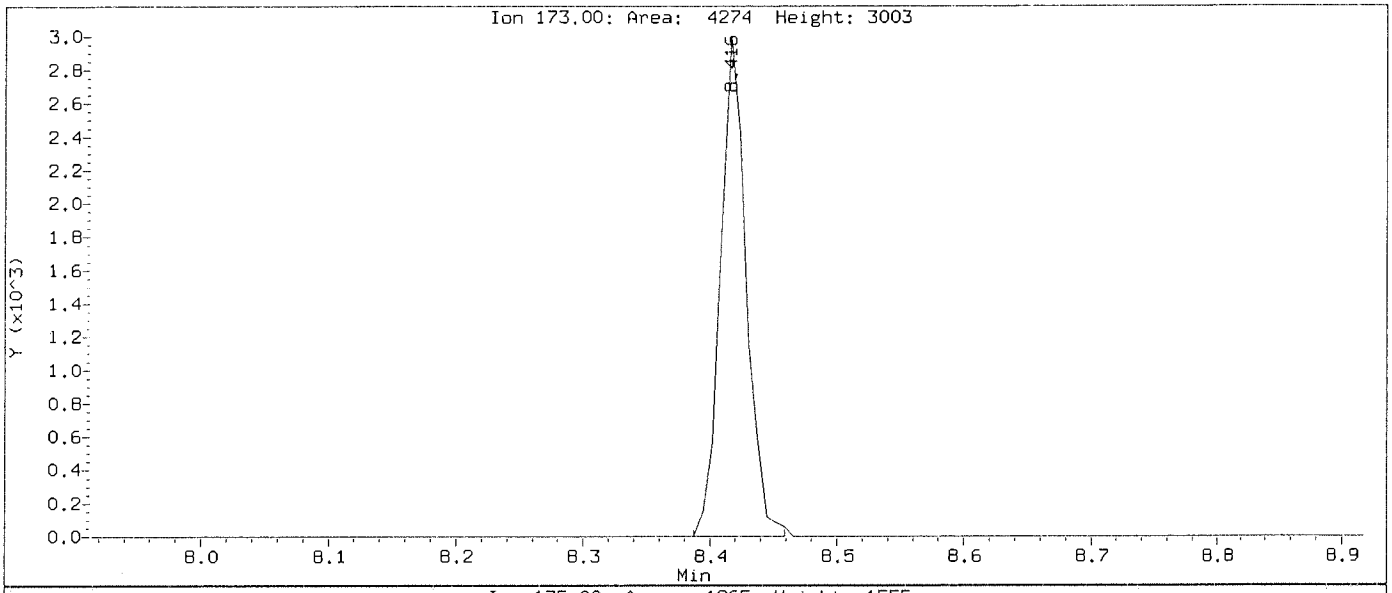
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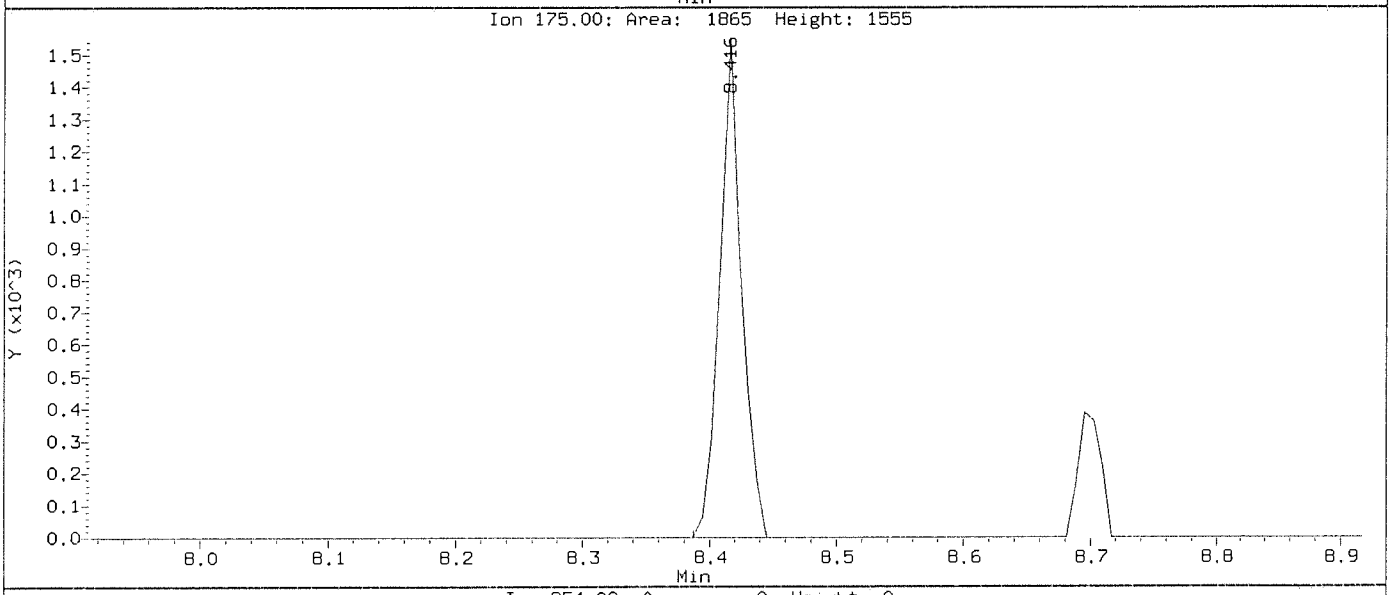


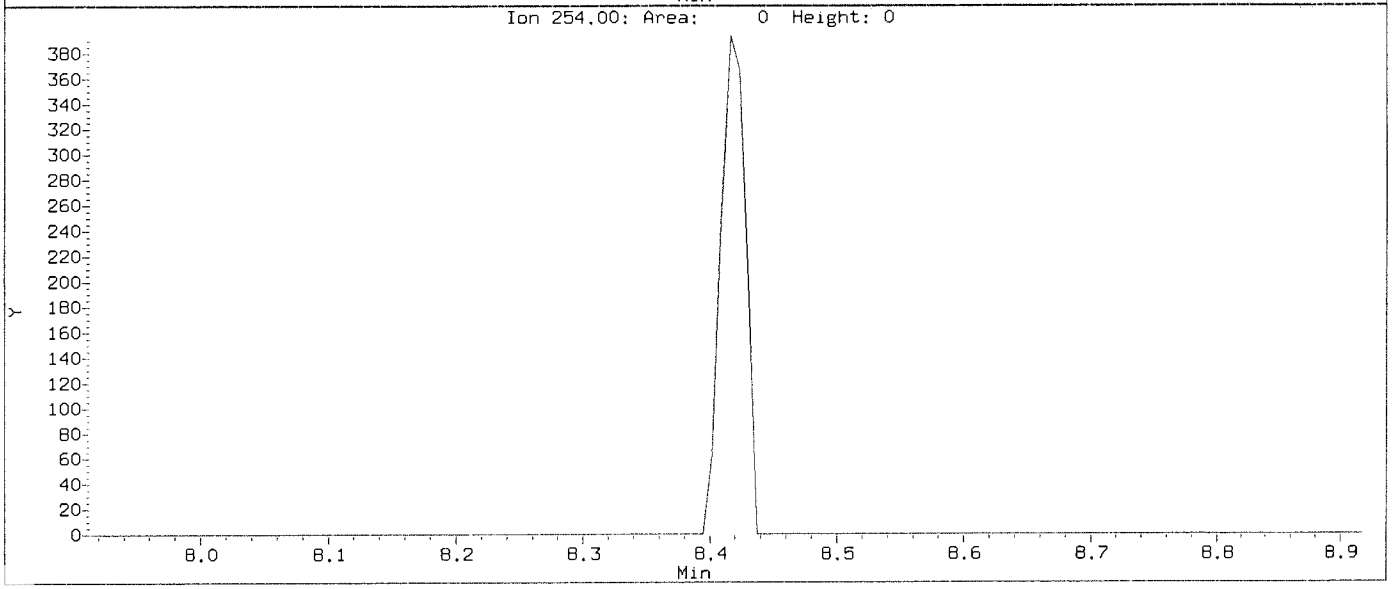


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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromoform
CAS Number: 75-25-2

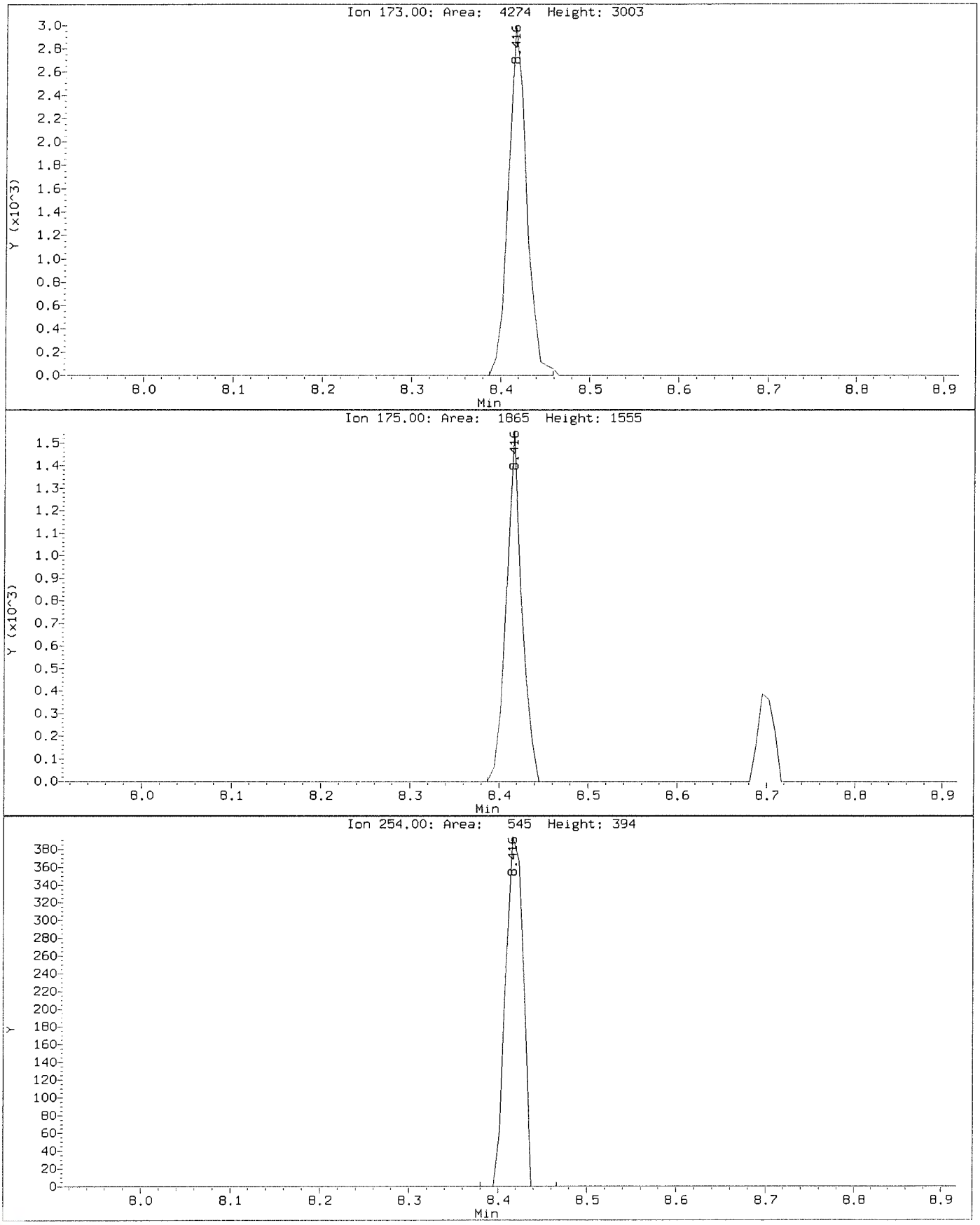






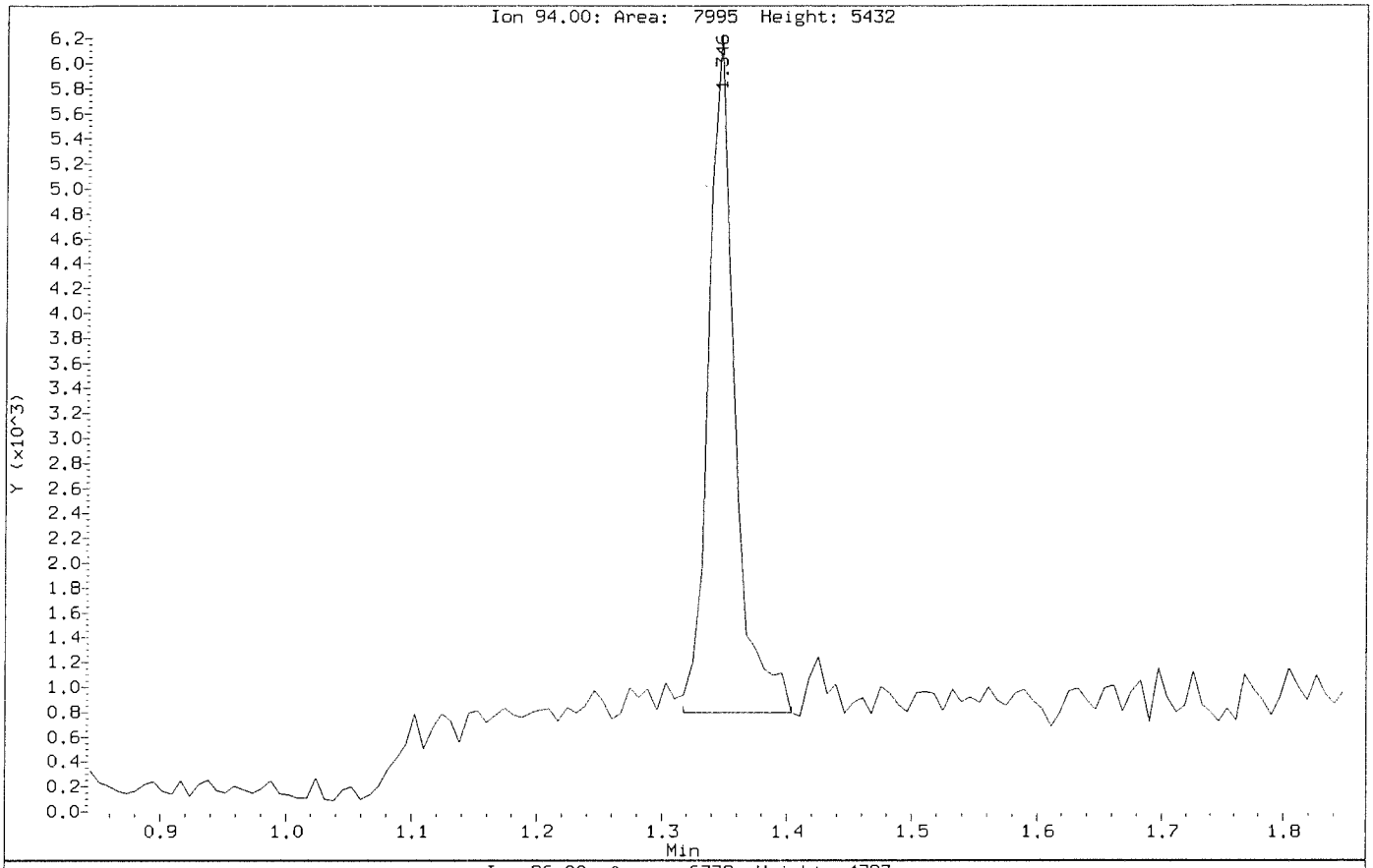
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Instrument: voa6.i
Client Sample ID: VSTD001

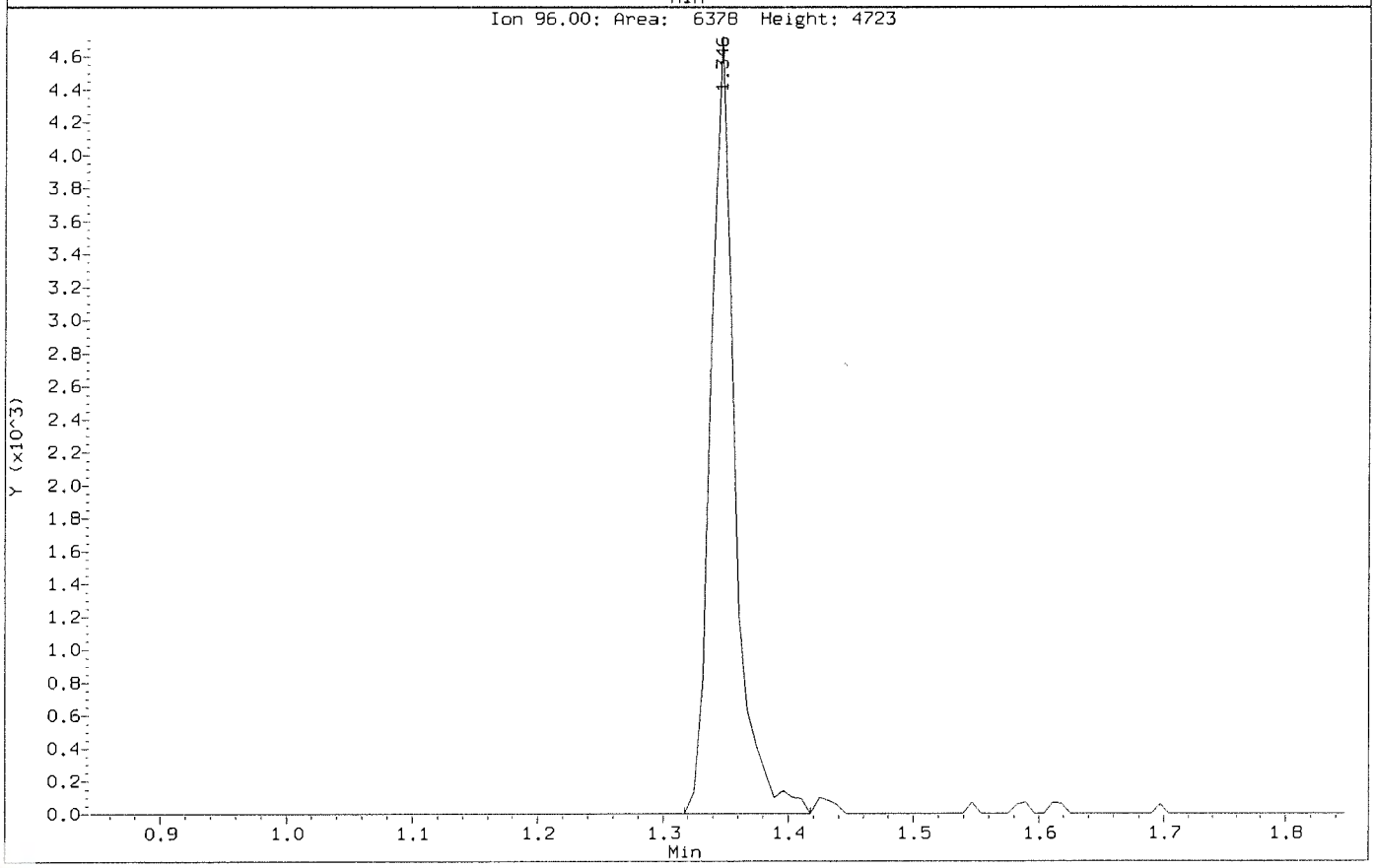
Compound: Bromoform
CAS Number: 75-25-2



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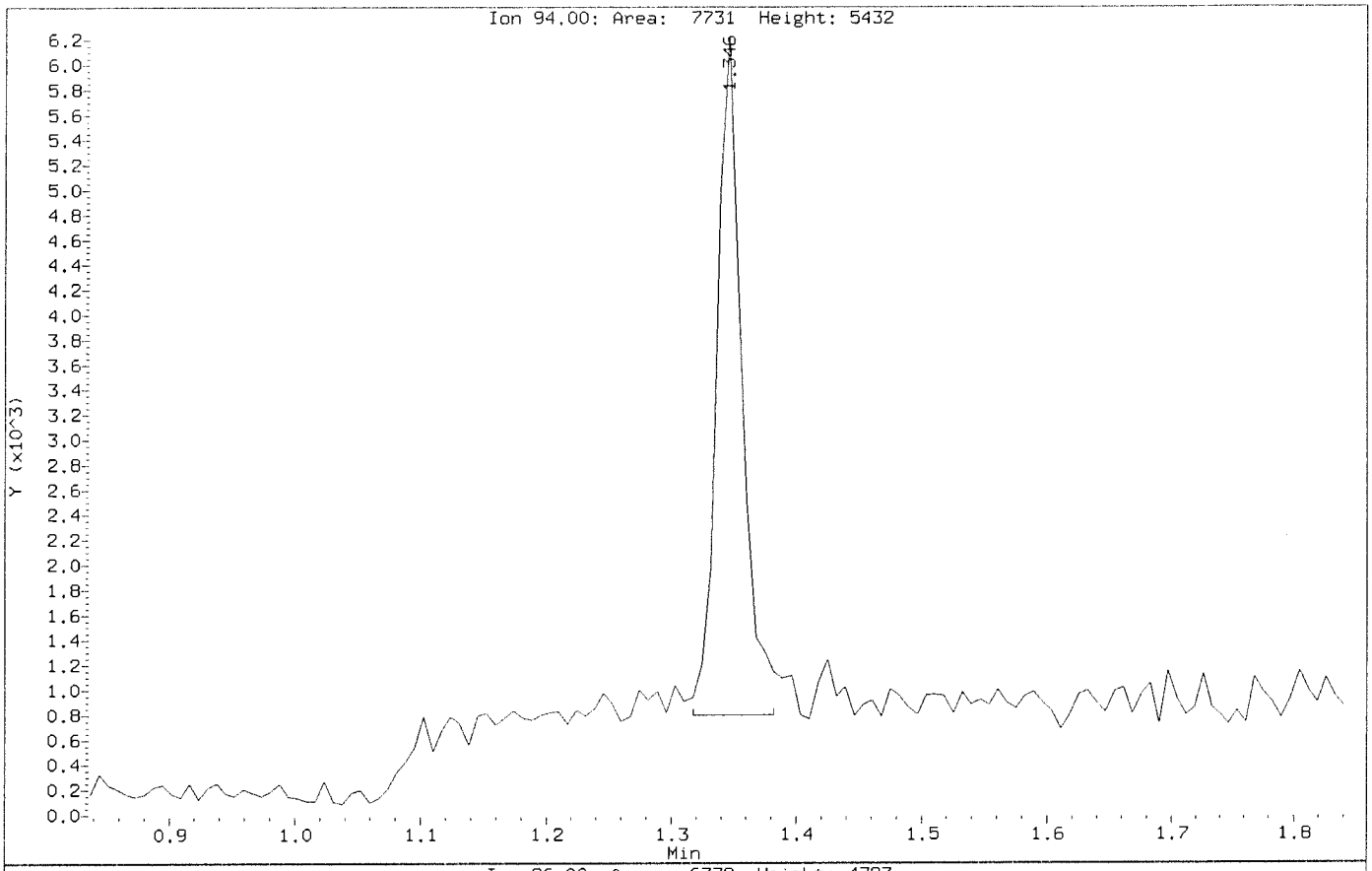
Compound: Bromomethane
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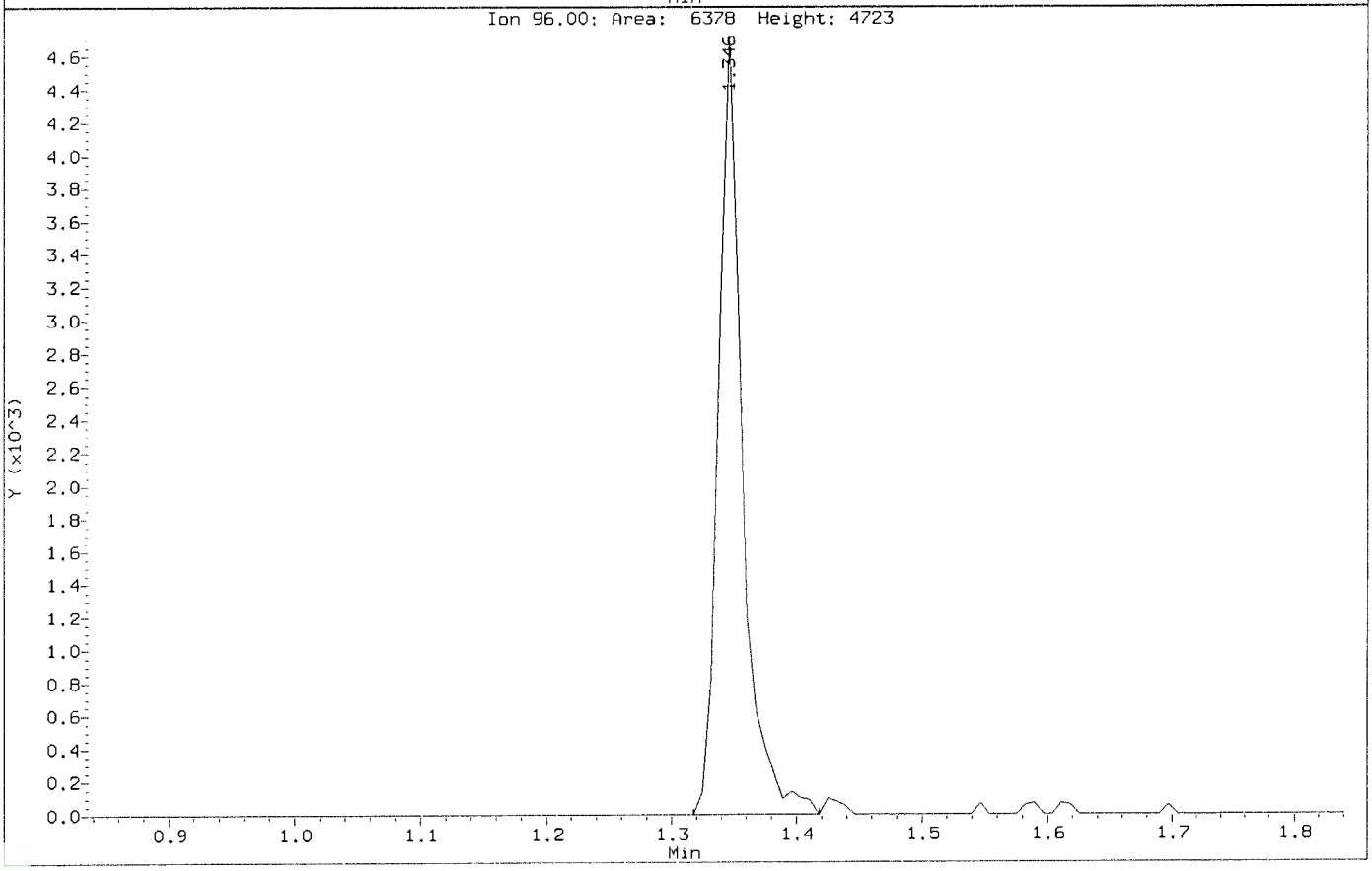




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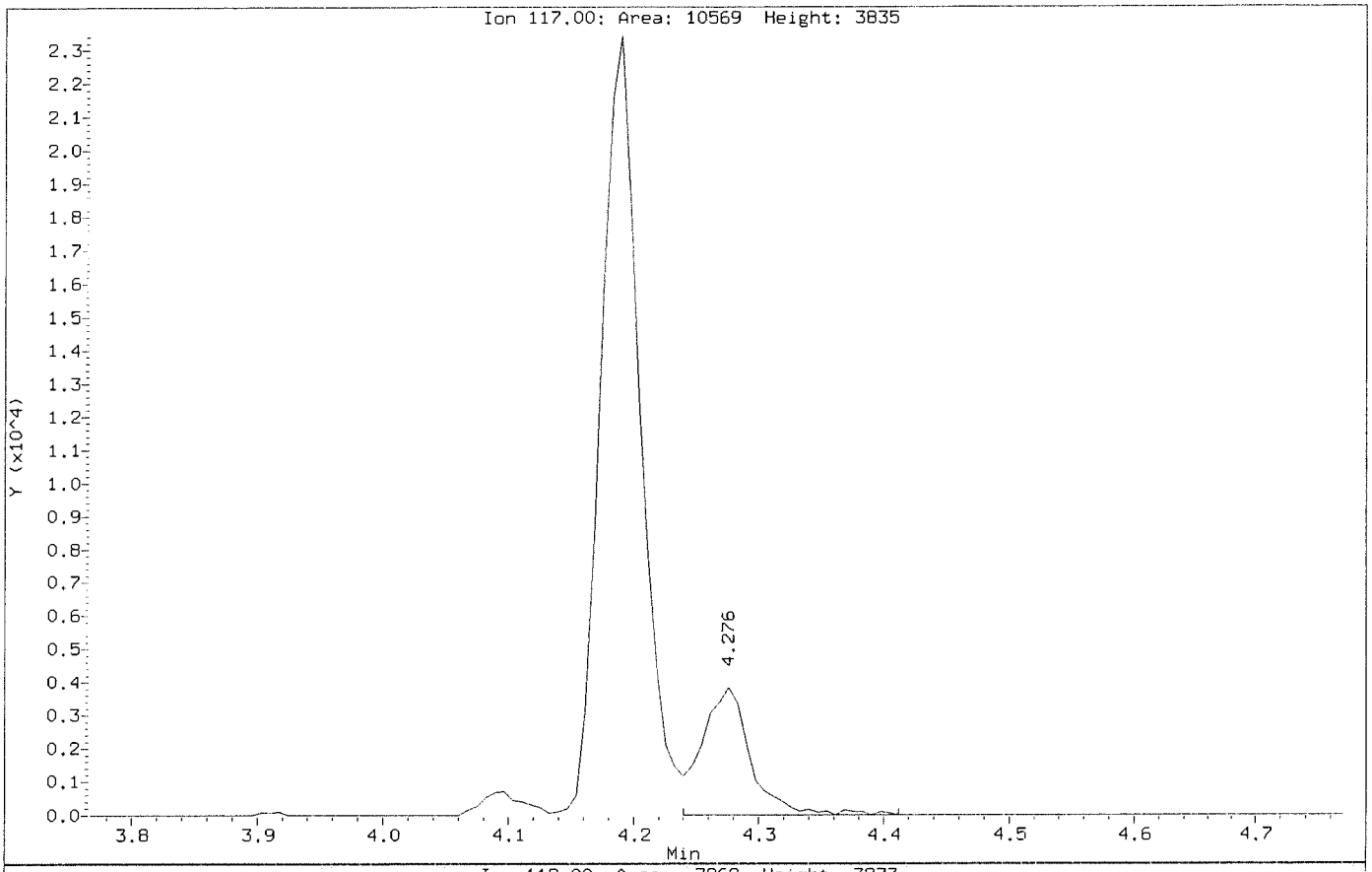
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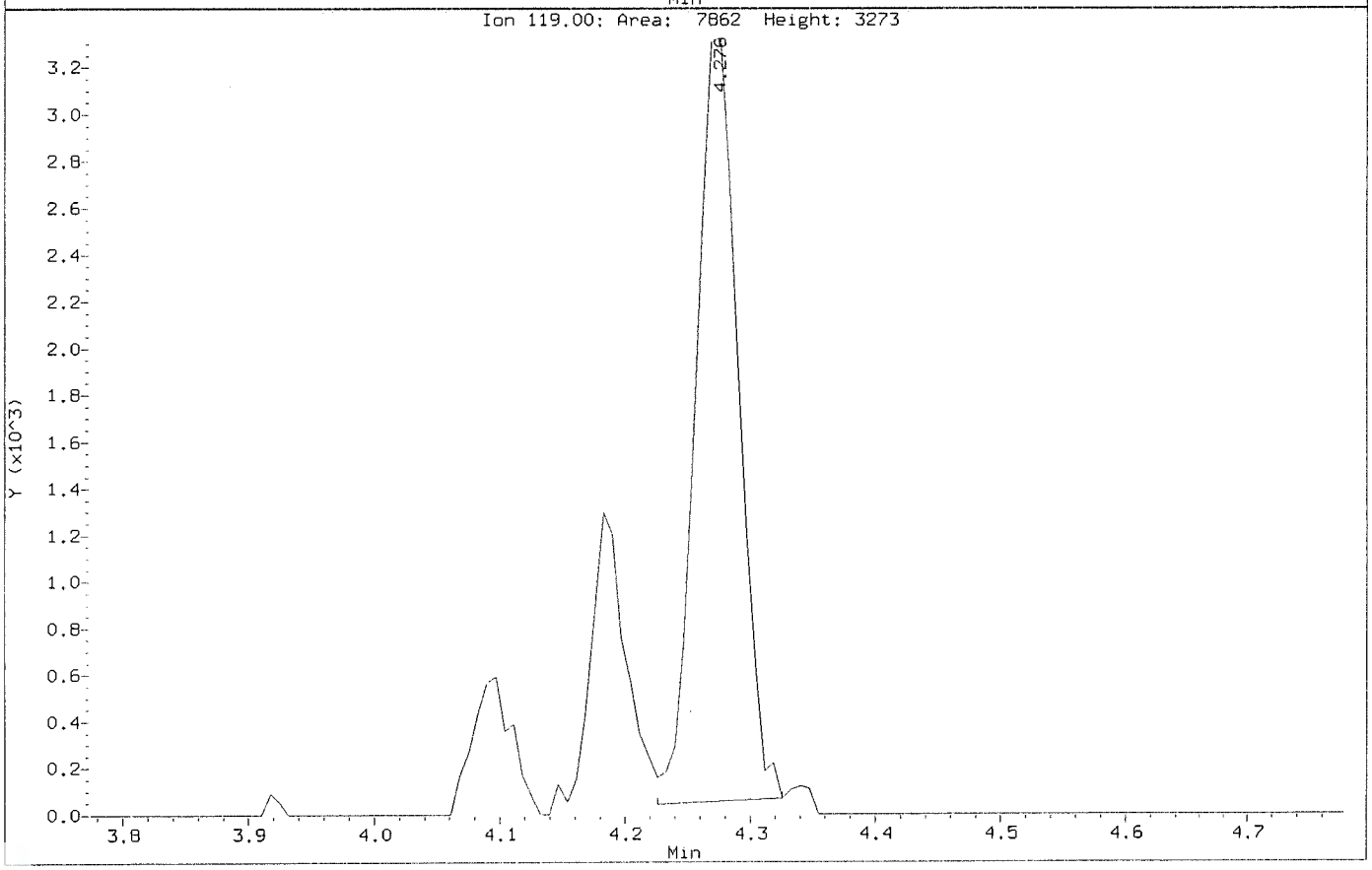




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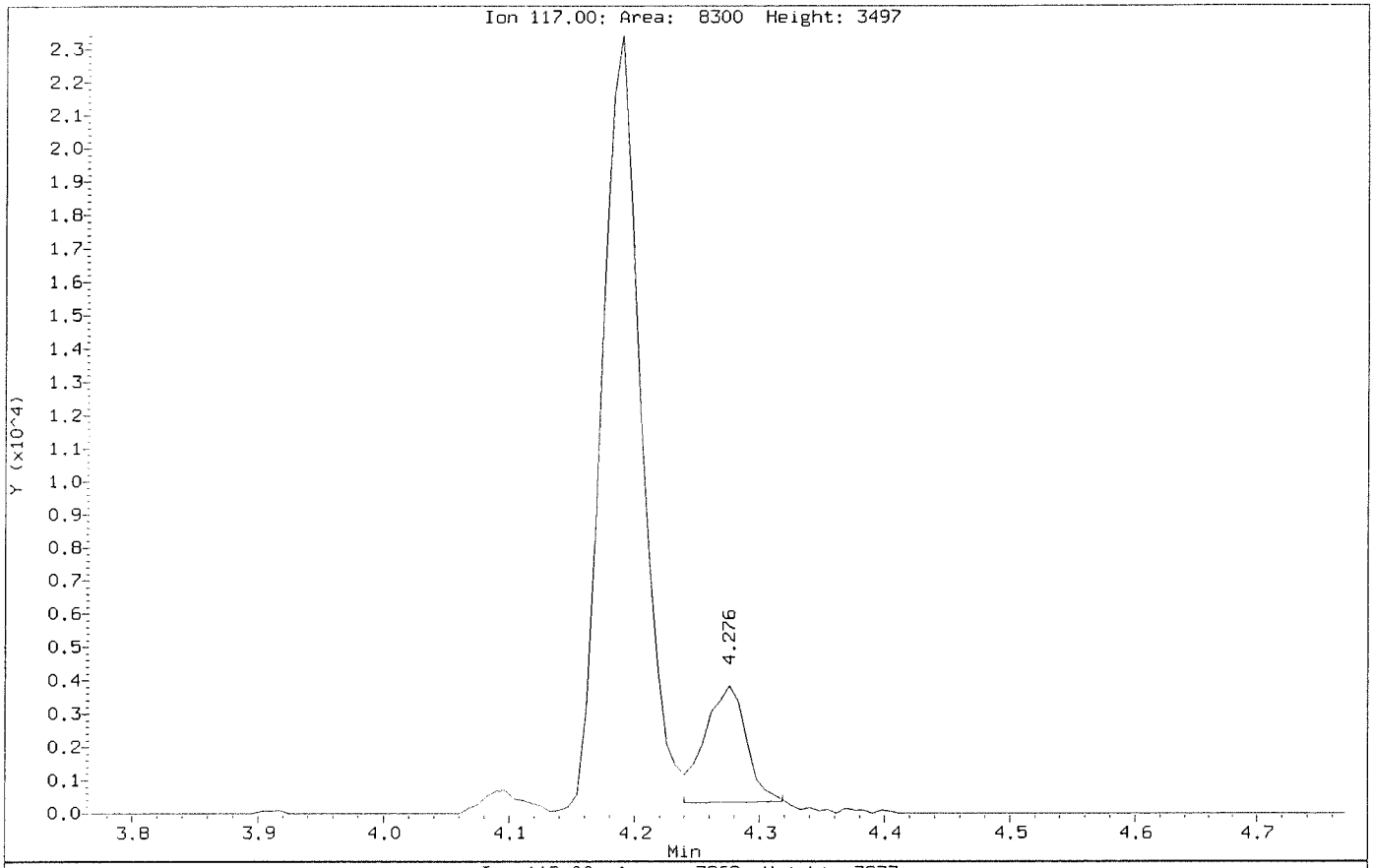
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

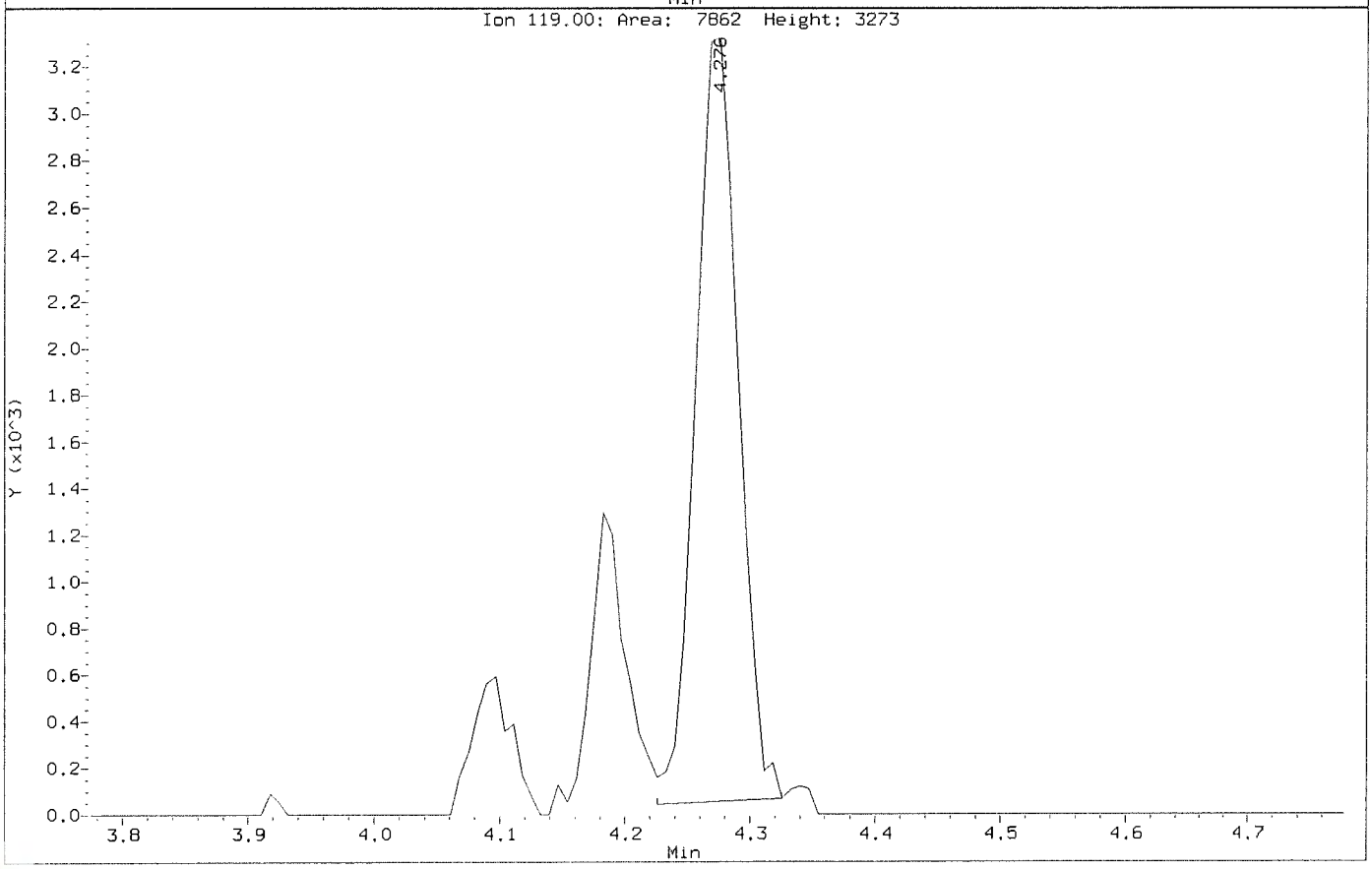




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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092405.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092405.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 24-SEP-2020 13:10
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 12:46 Cal File: X092404.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

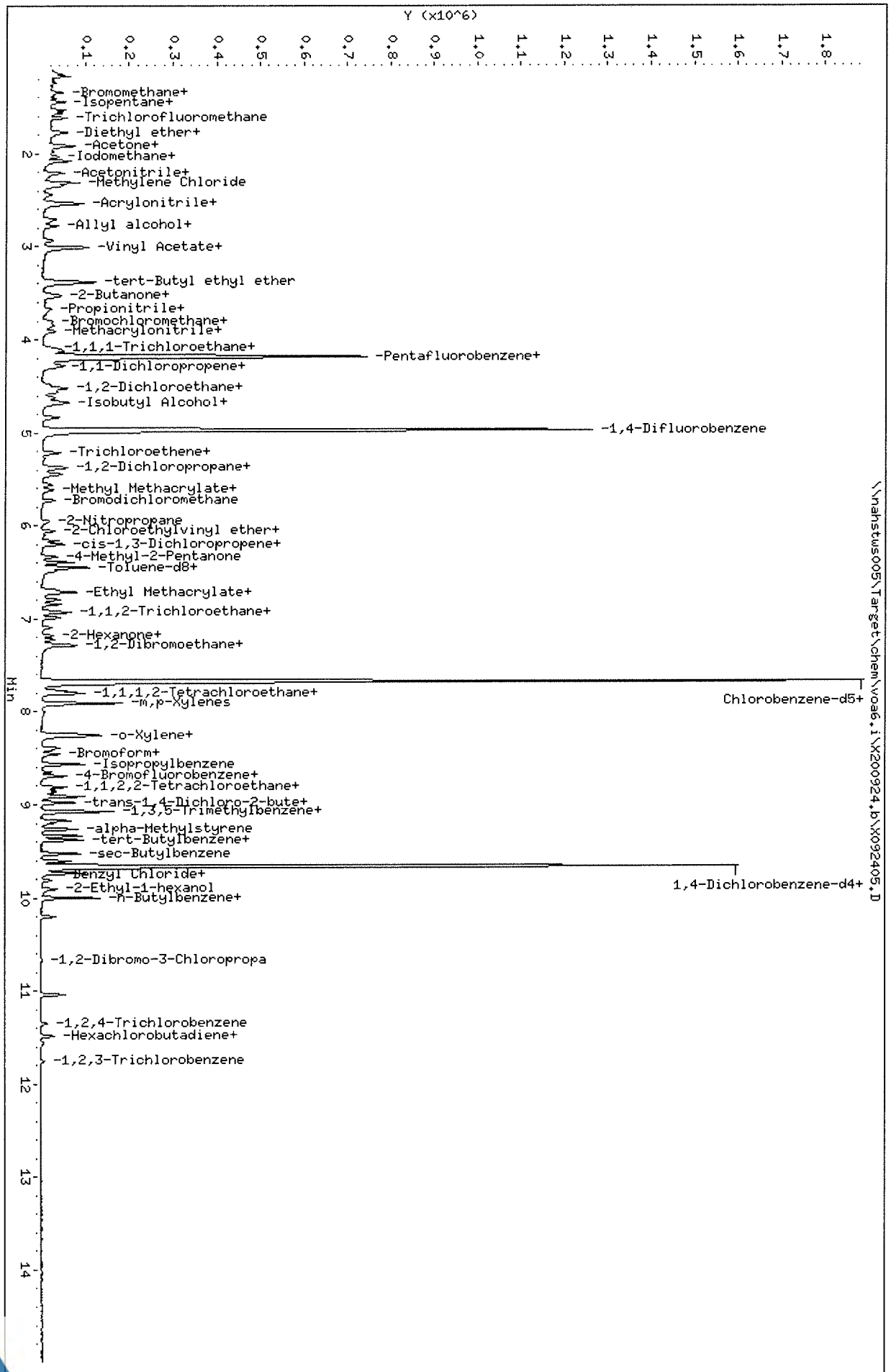
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	644357	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1019524	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	903632	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	382631	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	12469	2.00000	1.88(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	13937	2.00000	1.92(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	46992	2.00000	1.97(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	18232	2.00000	1.52(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	12510	2.00000	1.99(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	20125	2.00000	2.02(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	14679	2.00000	2.16(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	10973	2.00000	2.06(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	26490	2.00000	1.96(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	11109	2.00000	1.91(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	20197	2.00000	2.15(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	2737	2.00000	1.85(a)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	12294	2.00000	2.19(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	5479	2.00000	3.21(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	45912	2.00000	2.01(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	862	2.00000	1.86(a)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	12165	2.00000	1.93(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	21583	2.00000	2.02(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	16818	2.00000	1.91(a)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	15682	2.00000	2.07(a)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	45721	2.00000	2.02(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	25155	2.00000	2.04(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	22062	2.00000	2.00(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	24589	2.00000	2.01(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	20525	2.00000	2.02(a)
24 2-Butanone	43	3.602	3.602	(0.860)	8427	4.00000	3.58(a)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	41065	2.00000	2.06(a)
52 2-Hexanone	43	7.098	7.098	(0.925)	16923	4.00000	4.22(a)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	47538	2.00000	2.10(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	45536	2.00000	1.99(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	25721	4.00000	4.05(a)
10 Acetone	43	1.983	1.983	(0.473)	9048	4.00000	1.09(a)
37 Benzene	78	4.519	4.519	(0.909)	57516	2.00000	1.97(a)
74 Bromobenzene	156	8.810	8.810	(0.911)	15741	2.00000	2.03(a)
29 Bromochloromethane	128	3.810	3.810	(0.909)	8453	2.00000	2.09(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	18226	2.00000	1.97(a)
66 Bromoform	173	8.416	8.416	(1.097)	7643	2.00000	1.93(a)
6 Bromomethane	94	1.346	1.346	(0.321)	11427	2.00000	1.97(a)
19 Carbon Disulfide	76	2.076	2.076	(0.496)	76740	4.00000	3.83(a)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	17342	2.00000	2.12(a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	37718	2.00000	2.05(a)
7 Chloroethane	64	1.410	1.410	(0.337)	10093	2.00000	1.99(a)
28 Chloroform	83	3.917	3.917	(0.935)	25563	2.00000	2.04(a)
3 Chloromethane	50	1.081	1.081	(0.258)	16756	2.00000	1.89(a)
27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	15564	2.00000	1.97(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	23162	2.00000	1.98(a)
55 Dibromochloromethane	129	7.184	7.184	(0.937)	12783	2.00000	1.97(a)
44 Dibromomethane	93	5.558	5.558	(1.118)	9079	2.00000	2.02(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	12034	2.00000	3.82(a)
61 Ethylbenzene	106	7.807	7.807	(1.018)	19509	2.00000	2.03(a)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	5496	2.00000	2.94(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	57275	2.00000	2.05(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	47303	4.00000	4.10(a)
17 Methylene Chloride	84	2.313	2.313	(0.552)	16648	2.00000	1.68(a)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	36734	2.00000	1.86(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	65226	2.00000	1.99(a)
92 Naphthalene	128	11.553	11.553	(1.195)	7312	2.00000	2.04(a)
63 o-Xylene	106	8.244	8.244	(1.075)	23228	2.00000	2.06(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	54335	2.00000	2.03(a)
64 Styrene	104	8.265	8.265	(1.078)	37510	2.00000	1.94(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	39109	2.00000	2.07(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	12381	2.00000	2.16(a)
50 Toluene	91	6.453	6.453	(0.841)	60795	2.00000	2.07(a)
20 trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	13424	2.00000	2.01(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	18306	2.00000	1.87(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	14627	2.00000	2.00(a)
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	17957	2.00000	1.91(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	15623	2.00000	1.87(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

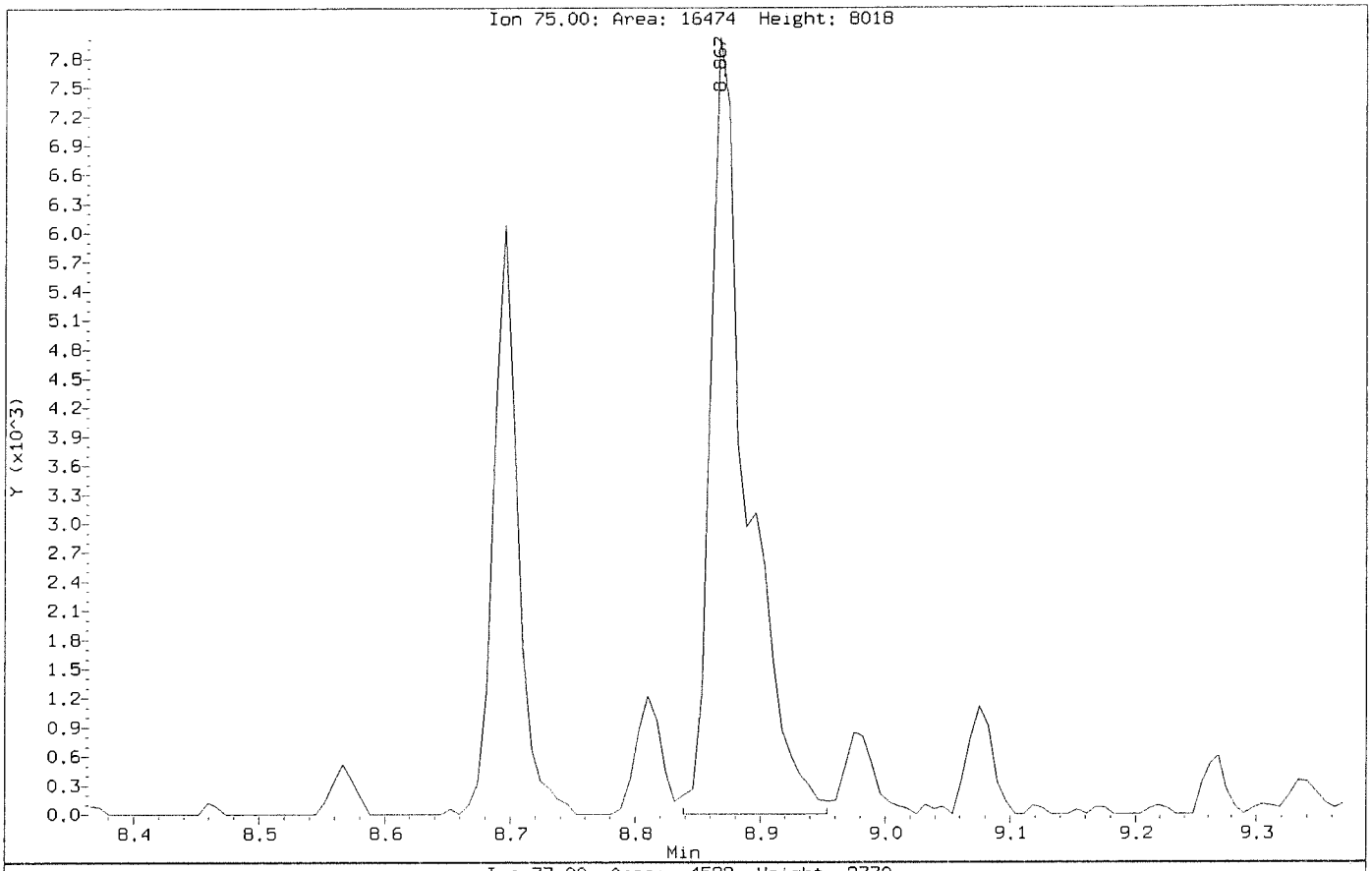


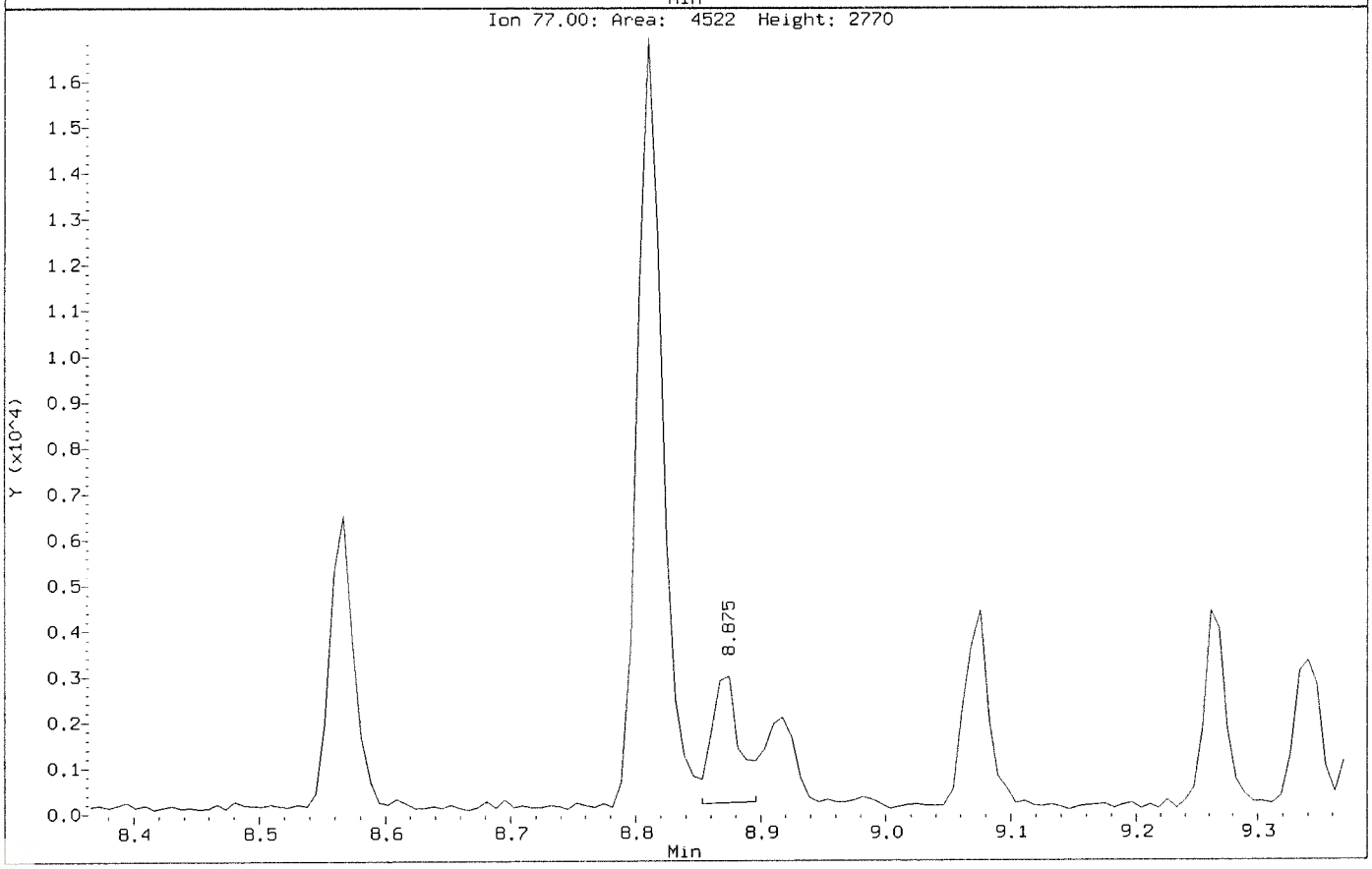
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Date : 24-SEP-2020 13:10
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092405.D
Injection Date: 24-SEP-2020 13:10
Instrument: voa6.i
Client Sample ID: VSTD002

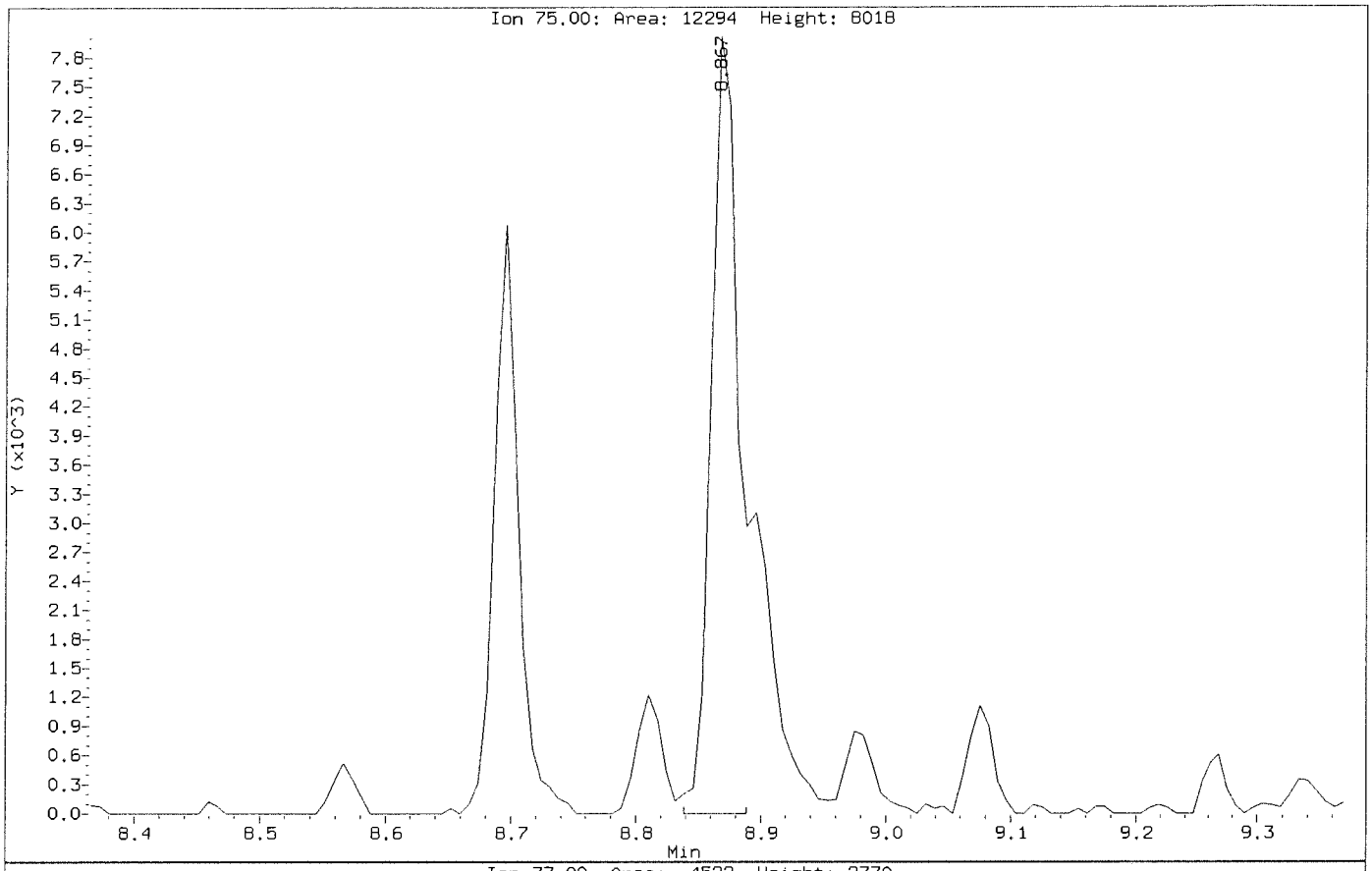
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

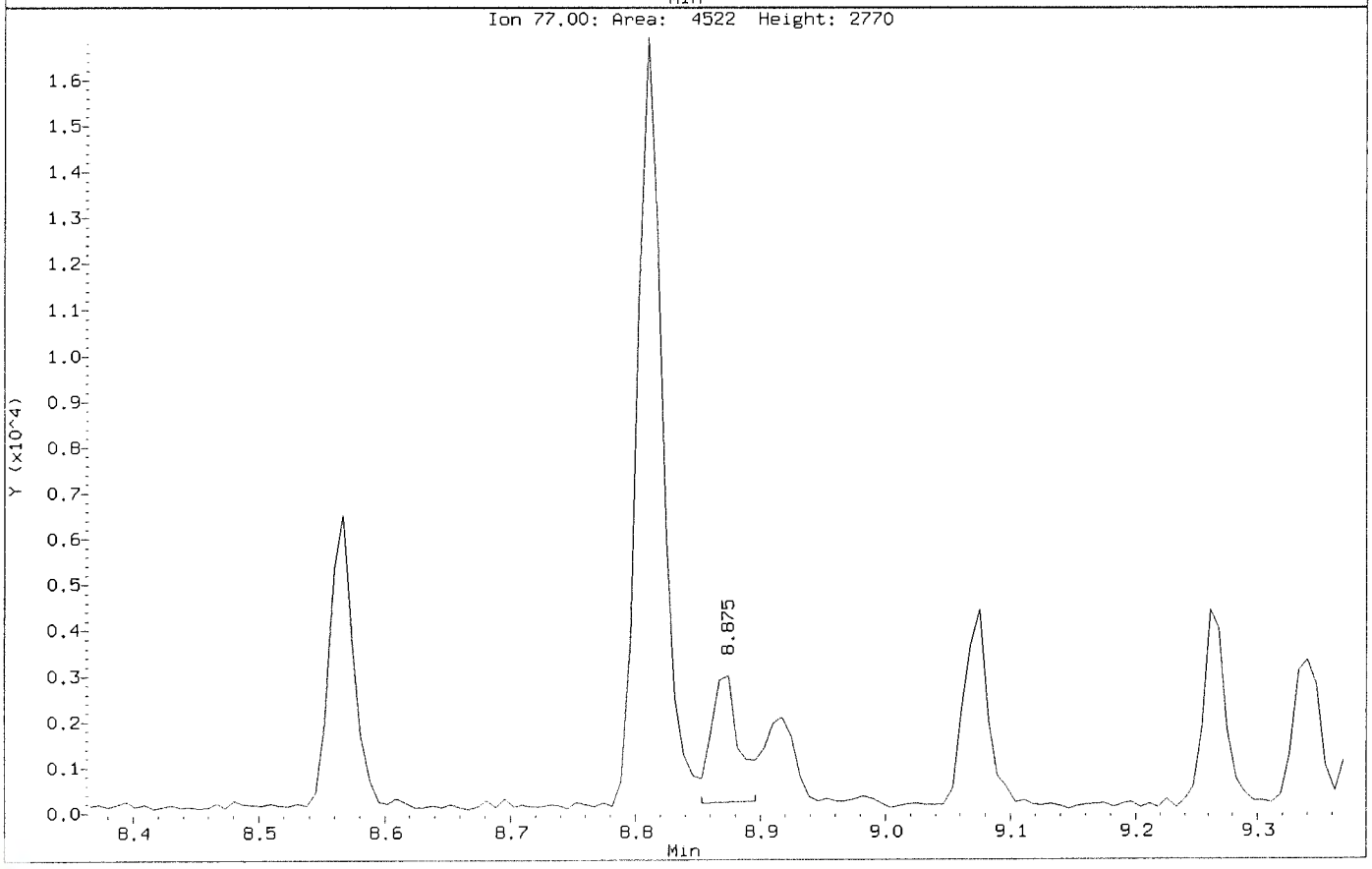




Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092405.D
Injection Date: 24-SEP-2020 13:10
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092406.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 24-SEP-2020 13:33
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 13:10 Cal File: X092405.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

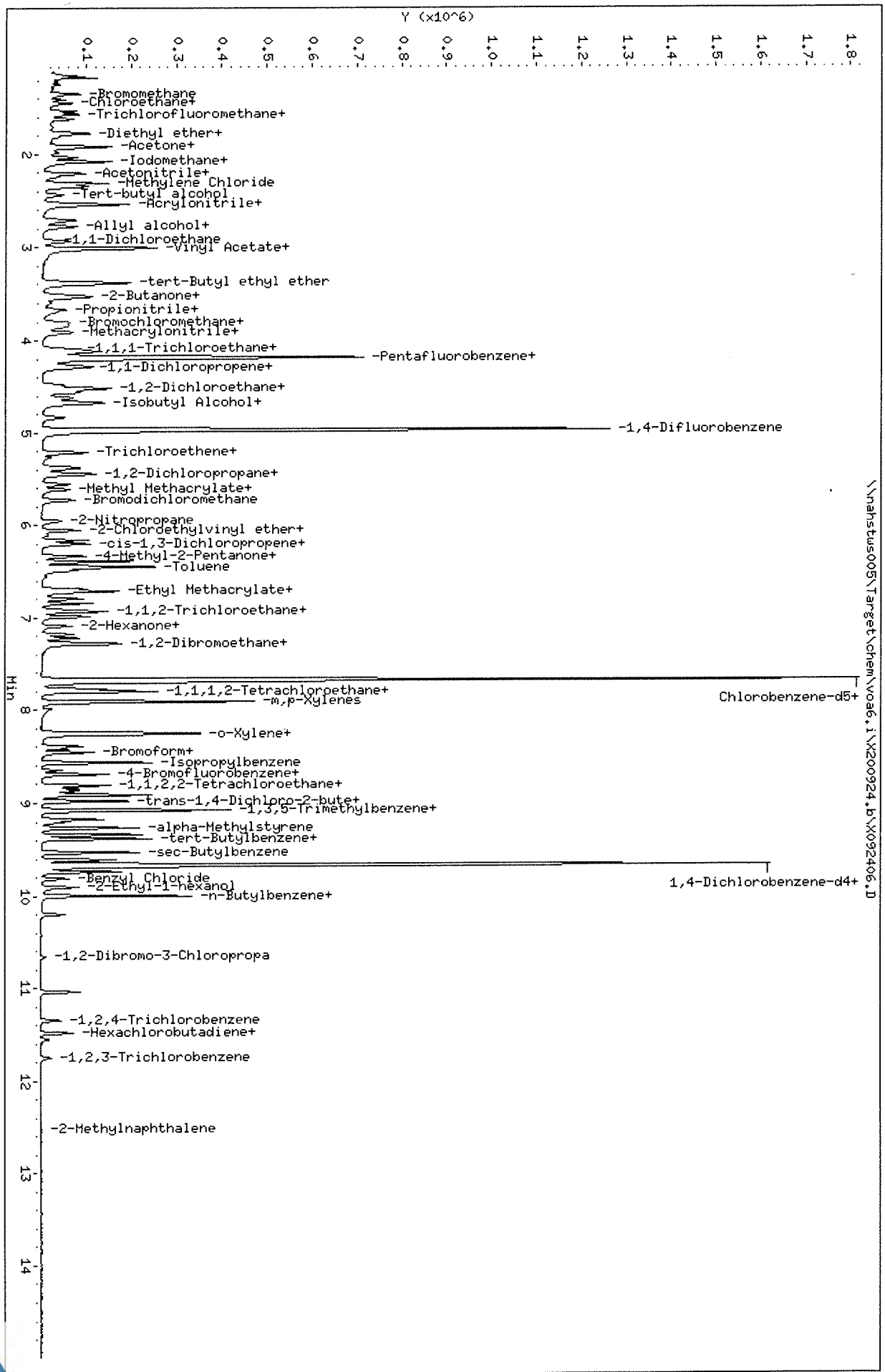
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	604947	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	968132	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	862629	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	366206	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	34017	5.00000	5.47
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	35655	5.00000	5.24
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	124776	5.00000	5.50
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	43900	5.00000	5.10
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	30508	5.00000	5.10
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	49631	5.00000	5.32
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	35579	5.00000	5.49
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	27209	5.00000	5.35
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	66717	5.00000	5.27
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	27129	5.00000	4.98(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	45564	5.00000	5.11
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	7596	5.00000	5.36
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	28529	5.00000	5.32(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	14272	5.00000	6.37
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	114323	5.00000	5.24
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	2370	5.00000	5.36
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	32725	5.00000	5.45
18 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	53633	5.00000	5.25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	45690	5.00000	5.47
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	38422	5.00000	5.35
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	112577	5.00000	5.20
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	61531	5.00000	5.22
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	57519	5.00000	5.47
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	61140	5.00000	5.22
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	49490	5.00000	5.21
24	2-Butanone	43	3.595	3.595	(0.858)	22783	10.0000	10.31
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	100230	5.00000	5.26
52	2-Hexanone	43	7.090	7.090	(0.924)	40720	10.0000	10.64
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	115574	5.00000	5.33
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	107669	5.00000	4.93(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	64724	10.0000	10.68
10	Acetone	43	1.976	1.976	(0.472)	17679	10.0000	7.78
37	Benzene	78	4.519	4.519	(0.909)	145224	5.00000	5.24
74	Bromobenzene	156	8.809	8.809	(0.911)	39295	5.00000	5.31
29	Bromochloromethane	128	3.802	3.802	(0.908)	19555	5.00000	5.17
39	Bromodichloromethane	83	5.729	5.729	(1.153)	45076	5.00000	5.13
66	Bromoform	173	8.415	8.415	(1.097)	19994	5.00000	5.30
6	Bromomethane	94	1.346	1.346	(0.321)	28439	5.00000	5.62
19	Carbon Disulfide	76	2.076	2.076	(0.496)	186941	10.0000	9.95
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	38907	5.00000	5.02
59	Chlorobenzene	112	7.699	7.699	(1.004)	92091	5.00000	5.24
7	Chloroethane	64	1.410	1.410	(0.337)	25052	5.00000	5.28
28	Chloroform	83	3.917	3.917	(0.935)	63153	5.00000	5.38
3	Chloromethane	50	1.081	1.081	(0.258)	41522	5.00000	5.01
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	40006	5.00000	5.39
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	58436	5.00000	5.26
55	Dibromochloromethane	129	7.176	7.176	(0.936)	32041	5.00000	5.19
44	Dibromomethane	93	5.557	5.557	(1.118)	22782	5.00000	5.35
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	28274	5.00000	6.46
61	Ethylbenzene	106	7.799	7.799	(1.017)	48263	5.00000	5.26
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	12681	5.00000	5.82
67	Isopropylbenzene	105	8.566	8.566	(1.117)	140289	5.00000	5.26
62	m,p-Xylenes	106	7.907	7.907	(1.031)	117010	10.0000	10.63
17	Methylene Chloride	84	2.313	2.313	(0.552)	39690	5.00000	5.37
87	n-Butylbenzene	91	9.998	9.998	(1.034)	91095	5.00000	4.82(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	160991	5.00000	5.15
92	Naphthalene	128	11.553	11.553	(1.195)	16943	5.00000	4.96(a)
63	o-Xylene	106	8.244	8.244	(1.075)	57363	5.00000	5.34
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	128686	5.00000	5.02
64	Styrene	104	8.265	8.265	(1.078)	97357	5.00000	5.29
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	92883	5.00000	5.15
56	Tetrachloroethene	164	6.933	6.933	(0.904)	28143	5.00000	5.16
50	Toluene	91	6.453	6.453	(0.841)	151563	5.00000	5.42
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	32989	5.00000	5.26
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	47268	5.00000	5.10
38	Trichloroethene	130	5.214	5.214	(1.049)	36421	5.00000	5.25
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	43540	5.00000	4.95(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	38248	5.00000	4.89(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

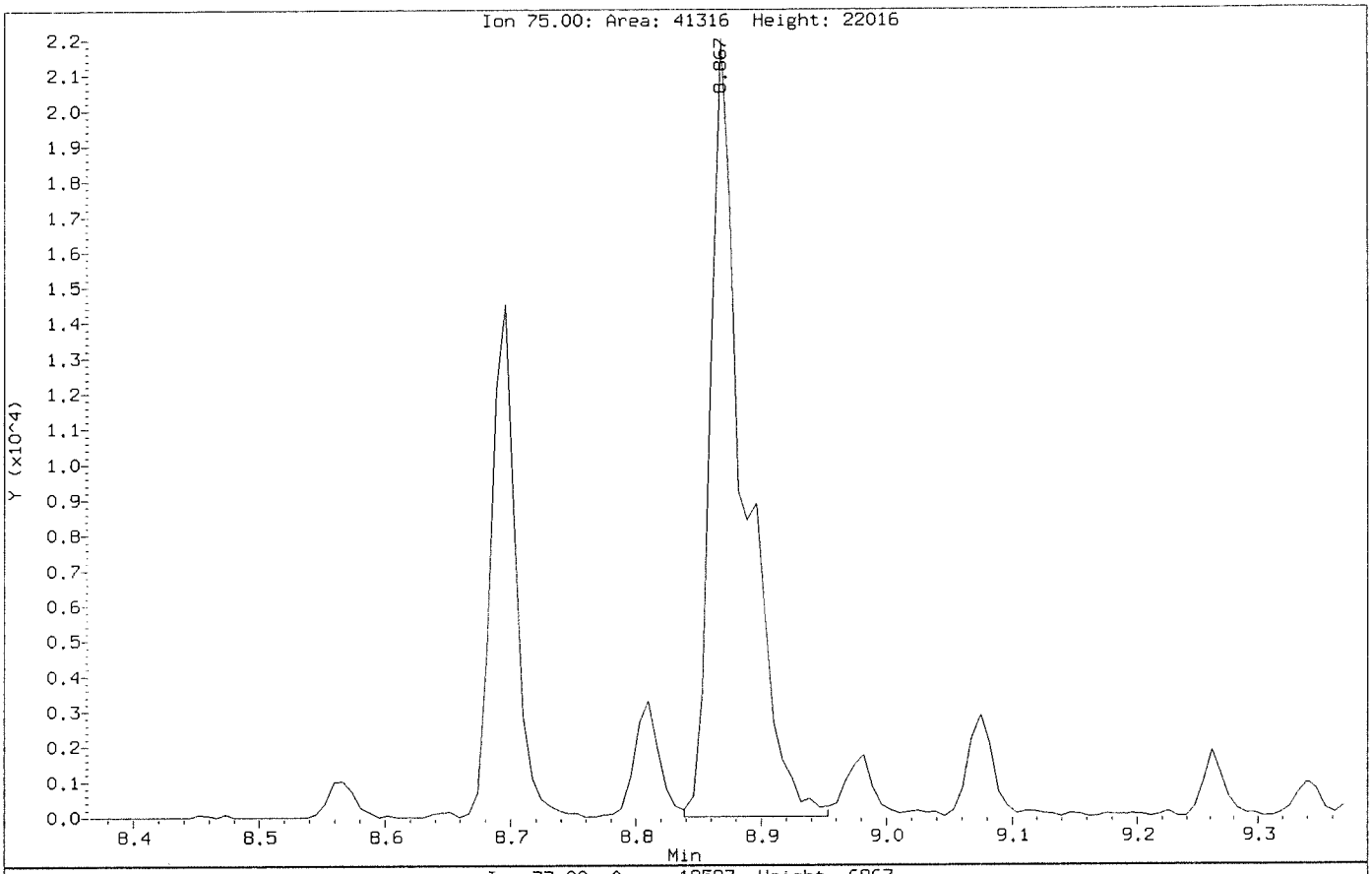


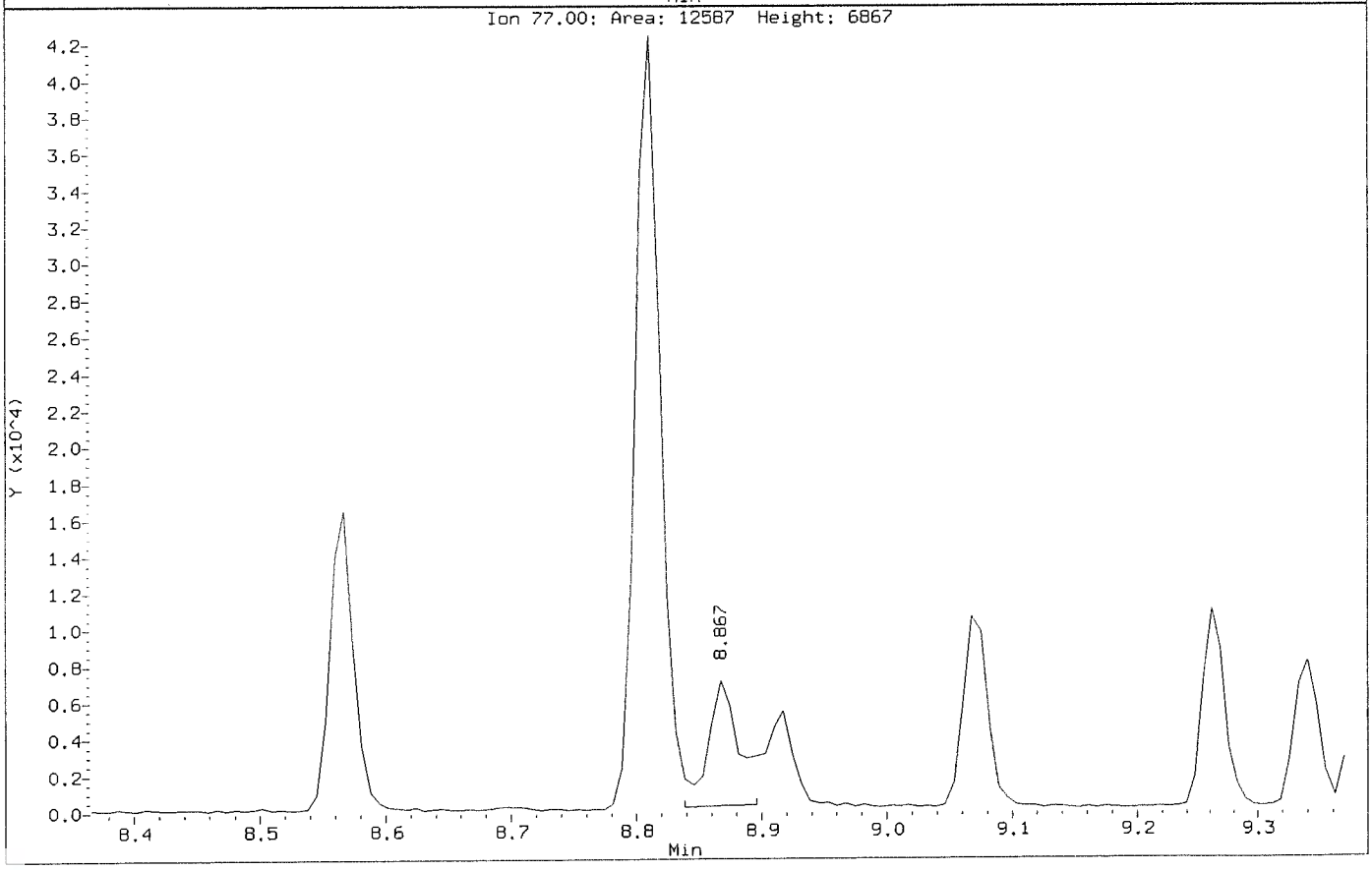
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Date : 24-SEP-2020 13:33
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092406.D
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Instrument: voa6.i
Client Sample ID: VSTD005

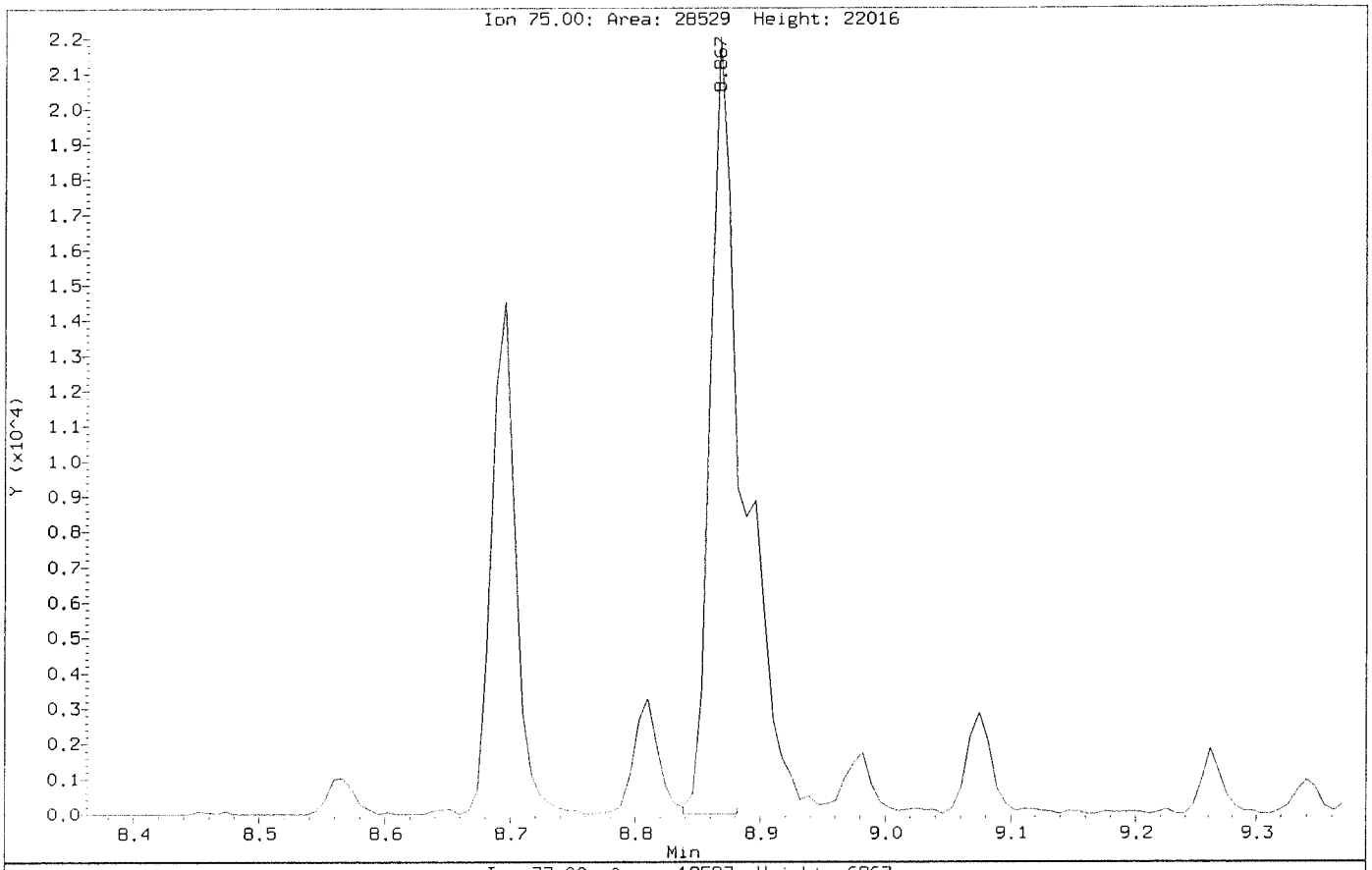
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CAS Number: 96-18-4

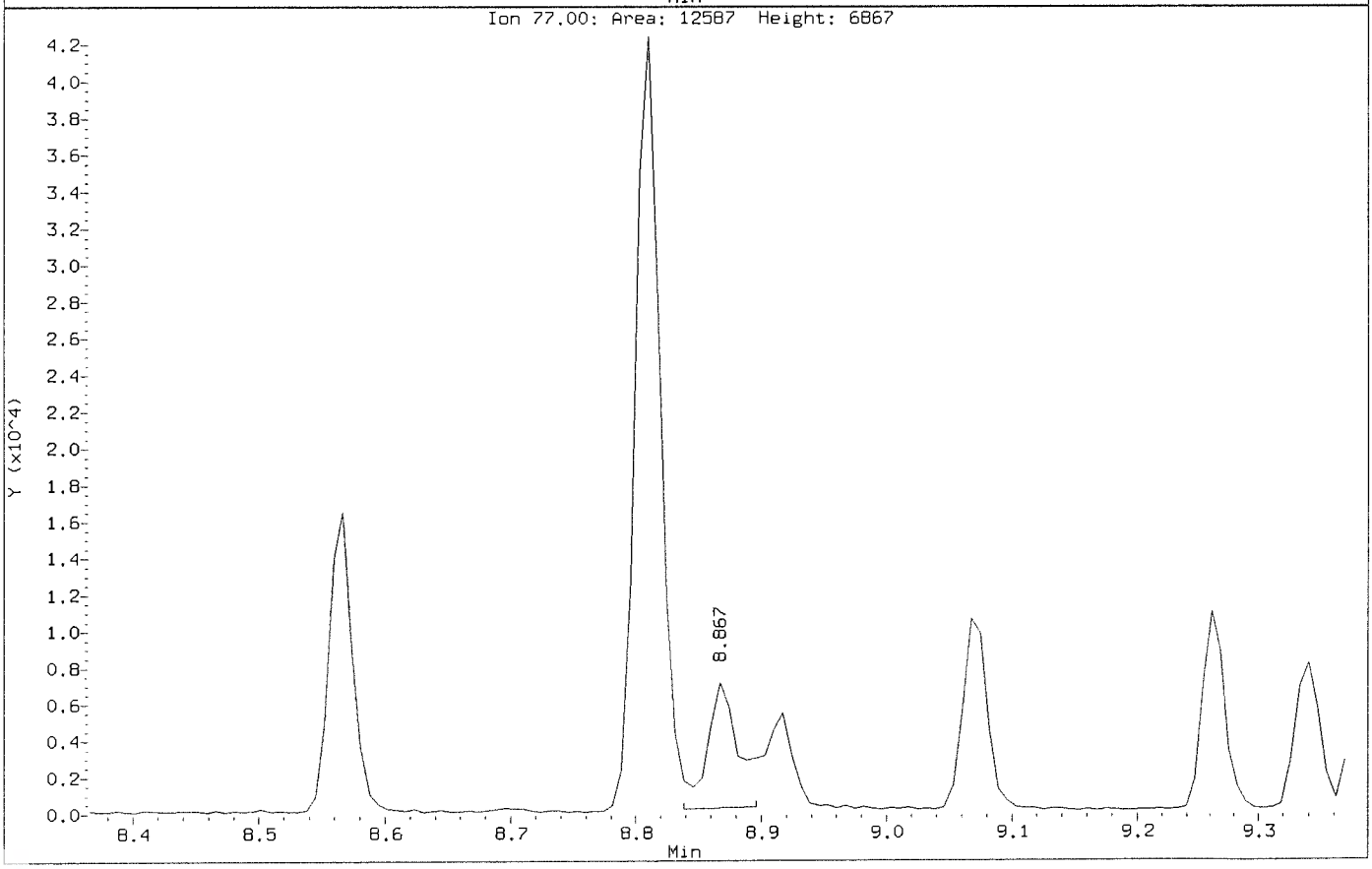




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Injection Date: 24-SEP-2020 13:33
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092407.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 24-SEP-2020 13:57
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 13:33 Cal File: X092406.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

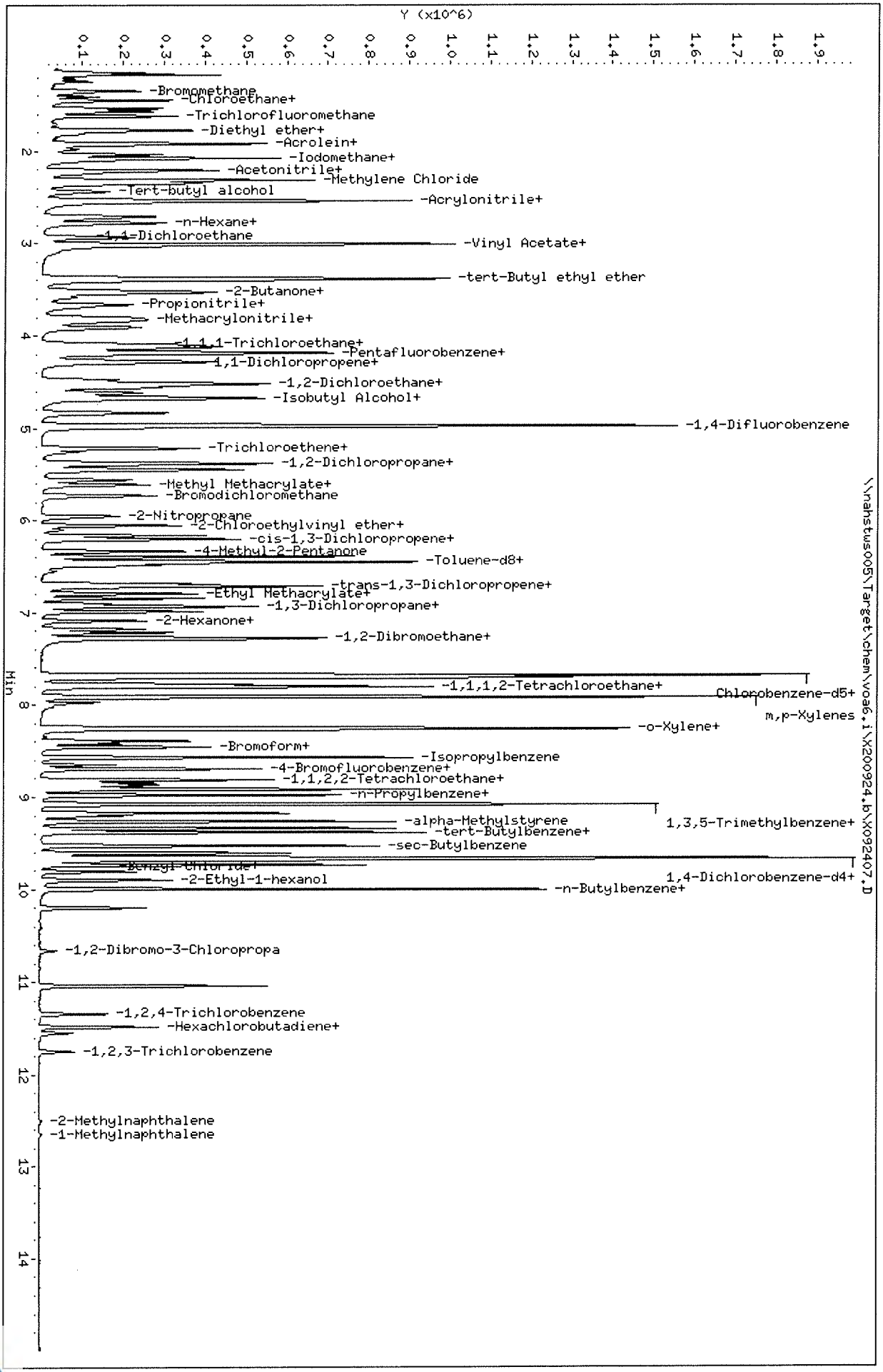
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	597686	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	958262	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	861110	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	364939	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	120544	20.0000	19.62
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	130718	20.0000	19.45
$	48 Toluene-d8	98	6.388	6.388	(0.833)	439641	20.0000	19.41
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	154353	20.0000	20.07
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	114469	20.0000	19.18
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	176318	20.0000	19.15
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	117650	20.0000	18.23
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	97092	20.0000	19.14
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	236851	20.0000	18.96
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	104067	20.0000	19.36
	32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	165987	20.0000	18.82
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	25160	20.0000	17.83
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	99152	20.0000	18.57(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	49391	20.0000	18.75
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	422220	20.0000	19.43
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	8129	20.0000	18.45
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	114808	20.0000	19.18
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	191275	20.0000	18.82

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	153916	20.0000	18.62
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	136853	20.0000	19.28
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	415398	20.0000	19.27
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	221882	20.0000	18.90
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	197702	20.0000	18.84
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	215720	20.0000	18.50
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	180409	20.0000	19.22
24	2-Butanone	43	3.588	3.588	(0.856)	87144	40.0000	39.94
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	361041	20.0000	19.03
52	2-Hexanone	43	7.090	7.090	(0.924)	146255	40.0000	38.30
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	402829	20.0000	18.65
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	412064	20.0000	18.95
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	226622	40.0000	37.49
10	Acetone	43	1.976	1.976	(0.472)	61351	40.0000	40.10
37	Benzene	78	4.519	4.519	(0.909)	523094	20.0000	19.08
74	Bromobenzene	156	8.809	8.809	(0.912)	140723	20.0000	19.08
29	Bromochloromethane	128	3.802	3.802	(0.908)	70448	20.0000	18.86
39	Bromodichloromethane	83	5.729	5.729	(1.153)	163173	20.0000	18.77
66	Bromoform	173	8.415	8.415	(1.097)	71380	20.0000	18.97
6	Bromomethane	94	1.345	1.345	(0.321)	96280	20.0000	19.85
19	Carbon Disulfide	76	2.076	2.076	(0.496)	712494	40.0000	38.38
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	143505	20.0000	18.72
59	Chlorobenzene	112	7.699	7.699	(1.004)	328244	20.0000	18.73
7	Chloroethane	64	1.410	1.410	(0.337)	87182	20.0000	18.62
28	Chloroform	83	3.917	3.917	(0.935)	223718	20.0000	19.31
3	Chloromethane	50	1.080	1.080	(0.258)	153741	20.0000	18.78
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	142521	20.0000	19.46
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	207519	20.0000	18.87
55	Dibromochloromethane	129	7.176	7.176	(0.936)	116110	20.0000	18.86
44	Dibromomethane	93	5.557	5.557	(1.118)	79007	20.0000	18.77
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	113538	20.0000	19.90
61	Ethylbenzene	106	7.799	7.799	(1.017)	174975	20.0000	19.13
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	49814	20.0000	20.19
67	Isopropylbenzene	105	8.566	8.566	(1.117)	508270	20.0000	19.11
62	m,p-Xylenes	106	7.907	7.907	(1.031)	423076	40.0000	38.53
17	Methylene Chloride	84	2.305	2.305	(0.550)	137362	20.0000	20.58
87	n-Butylbenzene	91	9.998	9.998	(1.035)	363106	20.0000	19.30
73	n-Propylbenzene	91	8.917	8.917	(0.923)	600477	20.0000	19.28
92	Naphthalene	128	11.546	11.546	(1.195)	61326	20.0000	18.02
63	o-Xylene	106	8.243	8.243	(1.075)	206196	20.0000	19.23
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	487237	20.0000	19.10
64	Styrene	104	8.265	8.265	(1.078)	353788	20.0000	19.28
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	342131	20.0000	19.04
56	Tetrachloroethene	164	6.933	6.933	(0.904)	104308	20.0000	19.17
50	Toluene	91	6.453	6.453	(0.841)	537067	20.0000	19.26
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	121098	20.0000	19.55
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	174041	20.0000	18.99
38	Trichloroethene	130	5.214	5.214	(1.049)	129379	20.0000	18.87
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	168693	20.0000	19.41
5	Vinyl Chloride	62	1.145	1.145	(0.273)	146437	20.0000	18.96

QC Flag Legend

M - Compound response manually integrated.

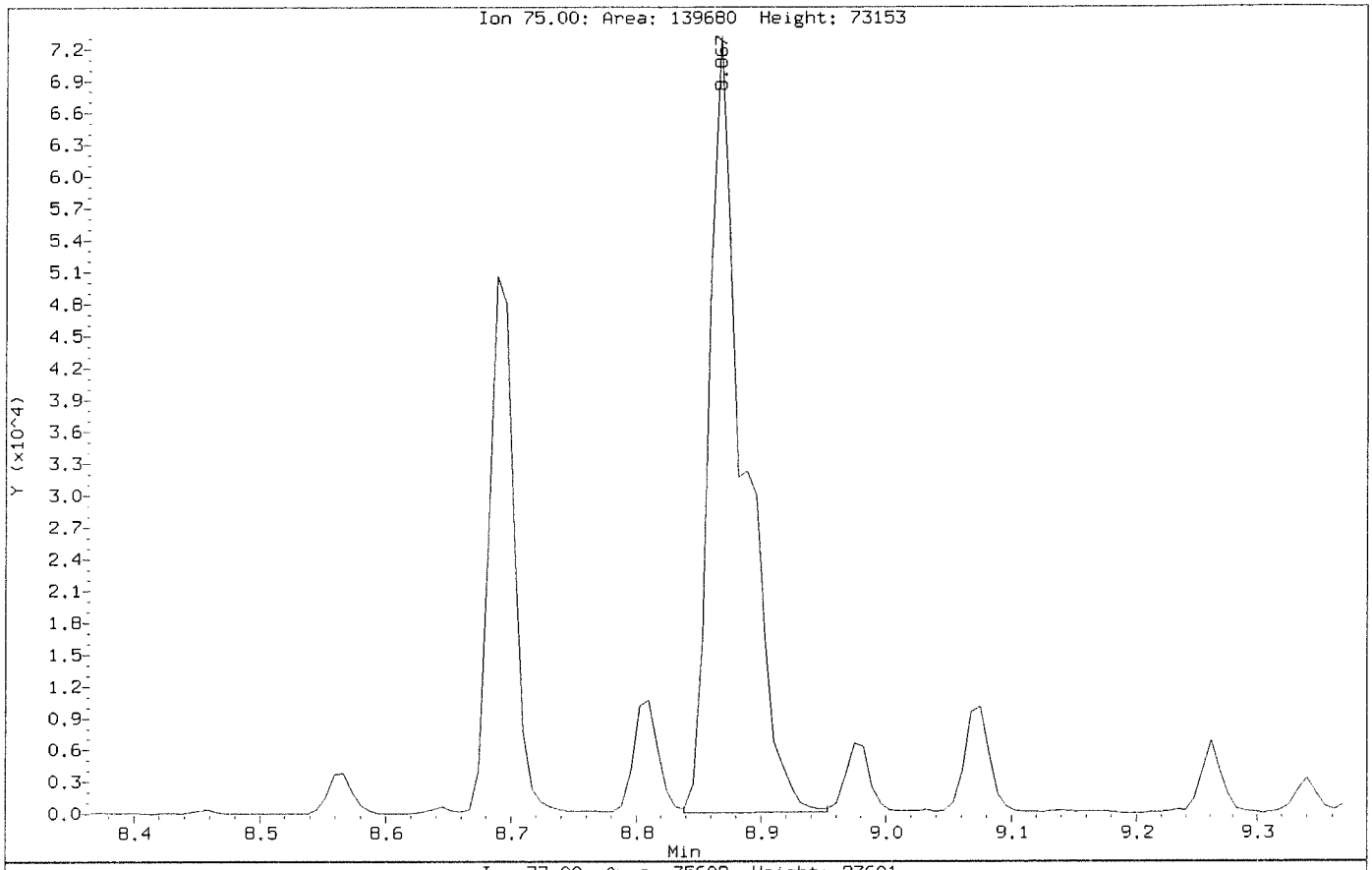


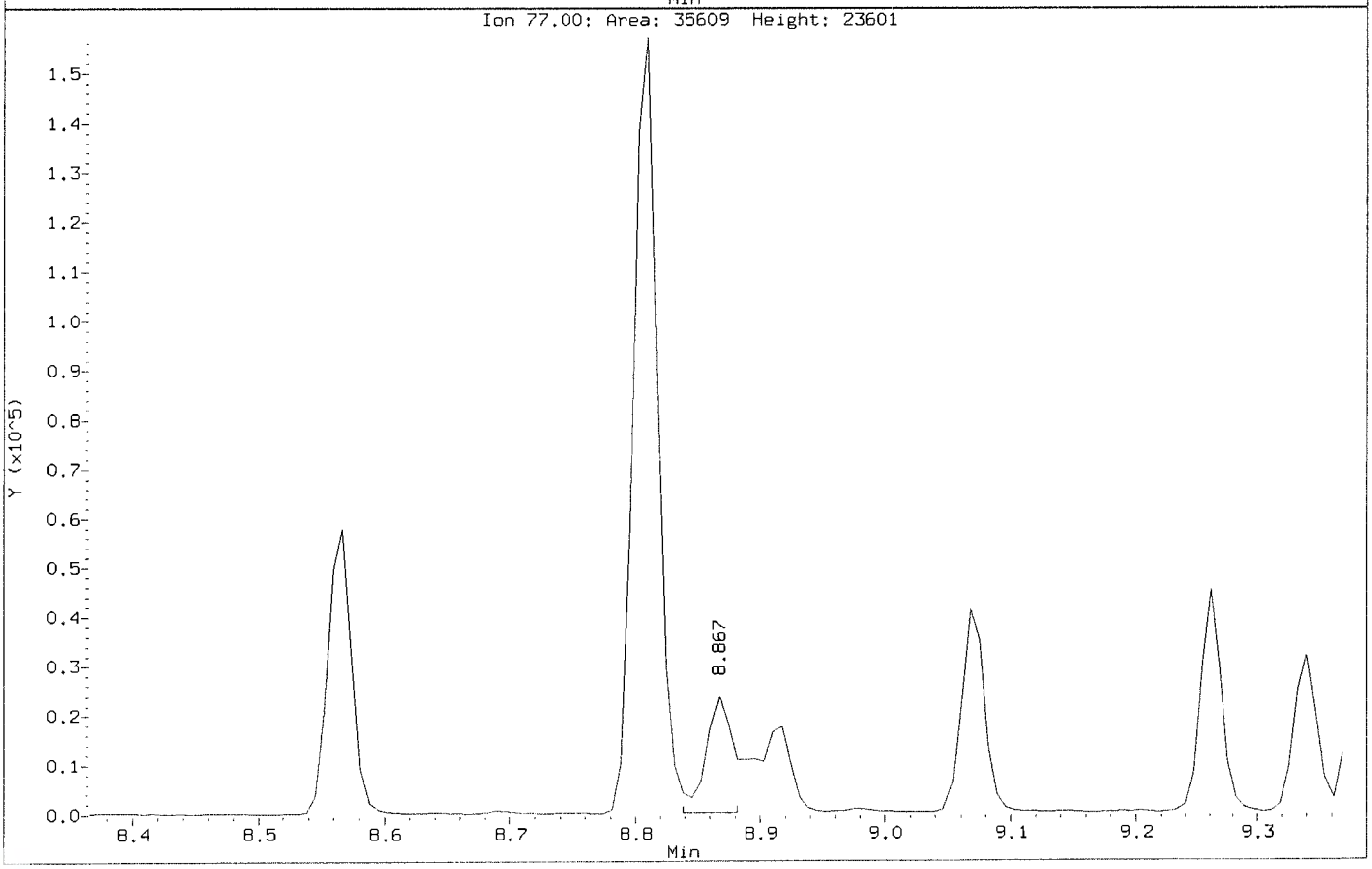
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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092407.D
Injection Date: 24-SEP-2020 13:57
Instrument: voa6.i
Client Sample ID: VSTD020

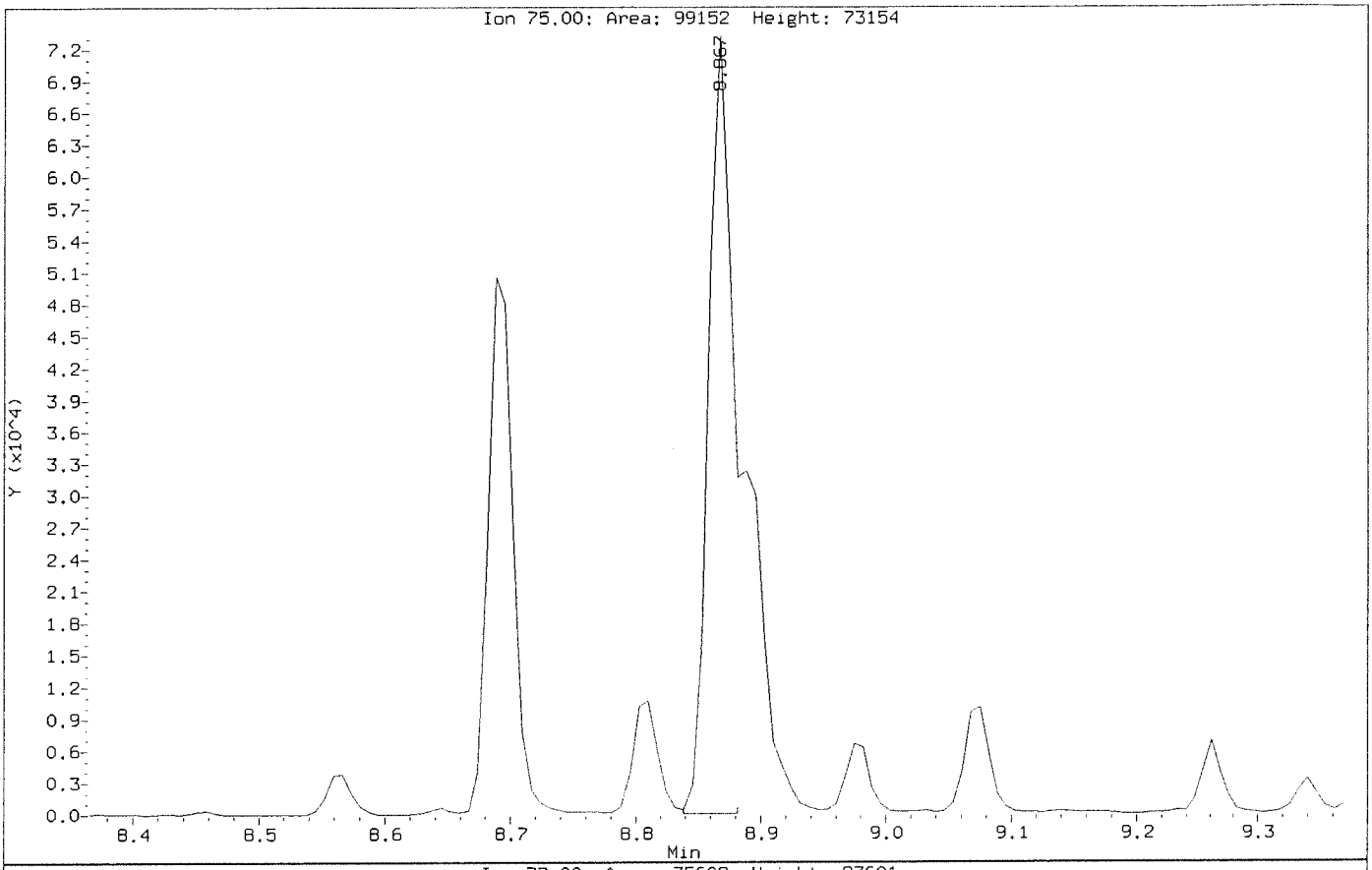
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

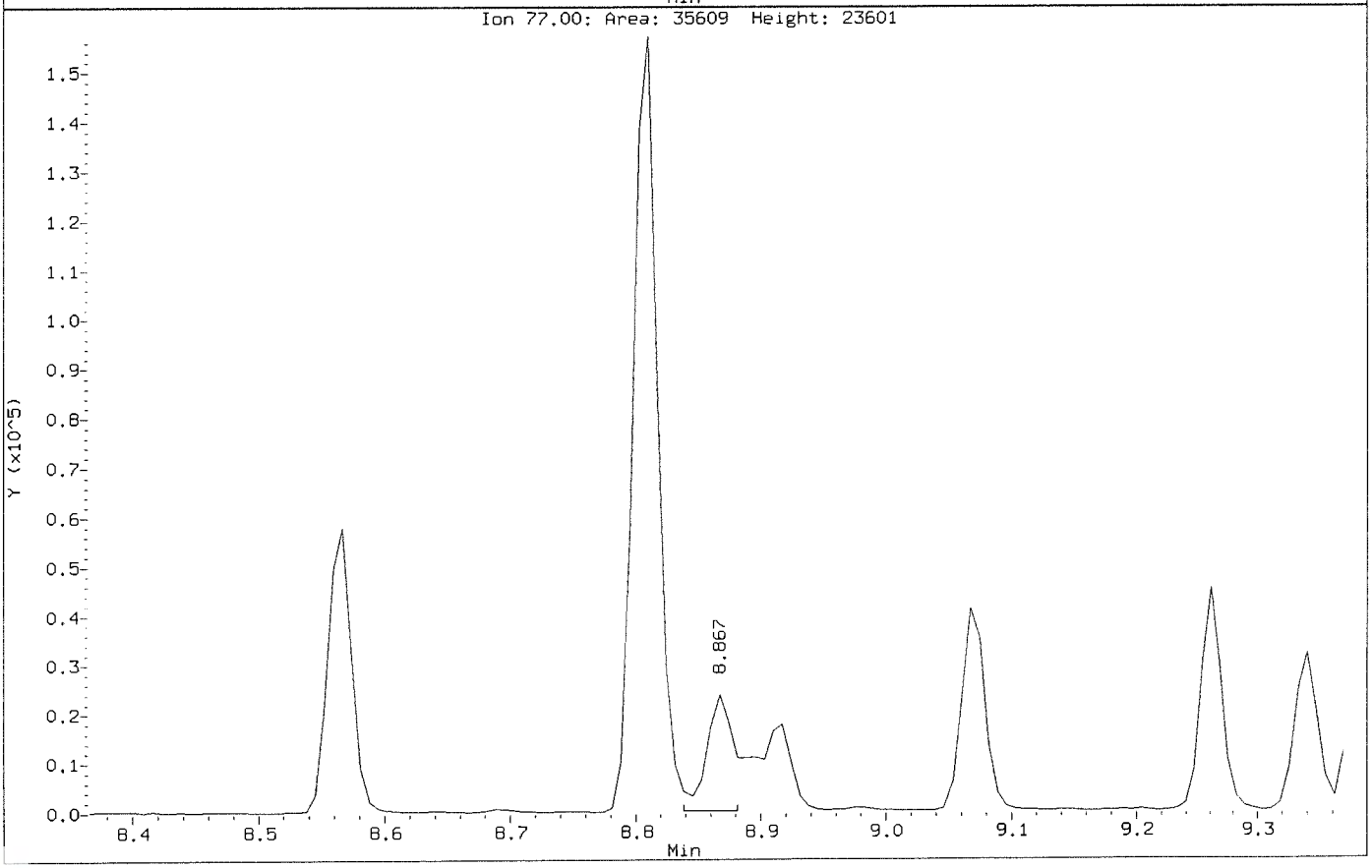




Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092407.D
Injection Date: 24-SEP-2020 13:57
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092408.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 24-SEP-2020 14:21
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 13:57 Cal File: X092407.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

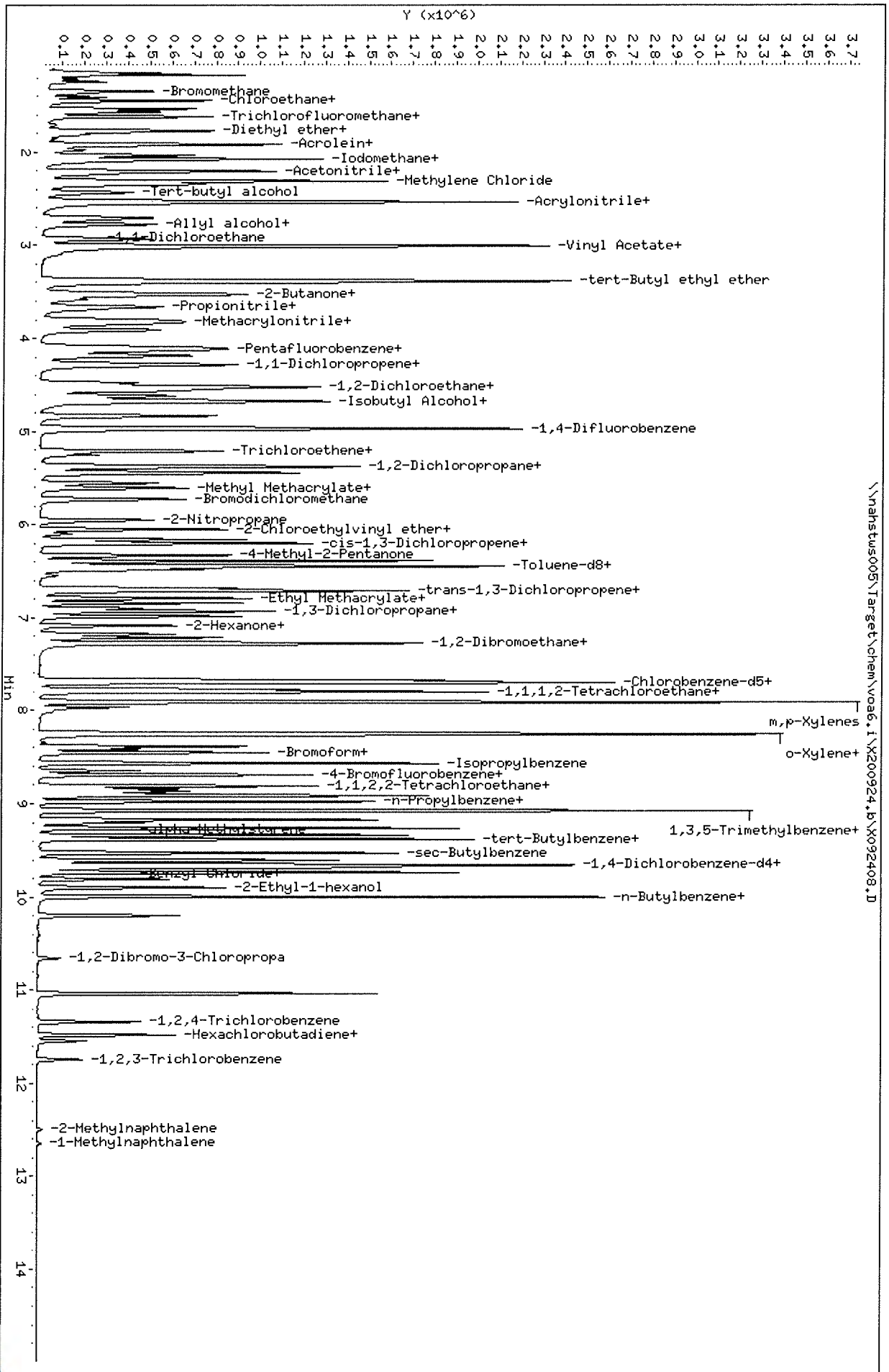
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	565166	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	910705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	829935	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	353927	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	277712	50.0000	47.81
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	307872	50.0000	48.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1029825	50.0000	47.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	368645	50.0000	50.98
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	261758	50.0000	45.51
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	375794	50.0000	43.17
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	280829	50.0000	44.86
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	221270	50.0000	45.26
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	531332	50.0000	45.00
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	227518	50.0000	44.77
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	348526	50.0000	41.59
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	58736	50.0000	42.93
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	243402	50.0000	47.01(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	124784	50.0000	46.66
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	888516	50.0000	42.17
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	20616	50.0000	48.27
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	264089	50.0000	45.79
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	429312	50.0000	43.56

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092408.D Page 2
Report Date: 13-Oct-2020 11:23

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	356652	50.0000	45.42
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	311284	50.0000	46.16
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	863451	50.0000	41.31
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	490714	50.0000	43.10
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	455083	50.0000	45.00
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	481319	50.0000	42.57
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	383156	50.0000	43.18
24	2-Butanone	43	3.580	3.580	(0.855)	233034	100.000	112.95
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	761189	50.0000	41.38
52	2-Hexanone	43	7.090	7.090	(0.924)	356053	100.000	96.75
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	865469	50.0000	41.33
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	837442	50.0000	39.72
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	544400	100.000	93.44
10	Acetone	43	1.976	1.976	(0.472)	153009	100.000	114.11
37	Benzene	78	4.519	4.519	(0.909)	1162667	50.0000	44.63
74	Bromobenzene	156	8.809	8.809	(0.912)	314740	50.0000	44.00
29	Bromochloromethane	128	3.802	3.802	(0.908)	157955	50.0000	44.72
39	Bromodichloromethane	83	5.729	5.729	(1.153)	375833	50.0000	45.50
66	Bromoform	173	8.415	8.415	(1.097)	174123	50.0000	48.03
6	Bromomethane	94	1.345	1.345	(0.321)	218171	50.0000	47.91
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1567013	100.000	89.27
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	295202	50.0000	40.52
59	Chlorobenzene	112	7.699	7.699	(1.004)	728183	50.0000	43.12
7	Chloroethane	64	1.403	1.403	(0.335)	194264	50.0000	43.87
28	Chloroform	83	3.917	3.917	(0.935)	502736	50.0000	45.89
3	Chloromethane	50	1.080	1.080	(0.258)	345422	50.0000	44.63
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	318945	50.0000	46.06
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	483233	50.0000	46.25
55	Dibromochloromethane	129	7.176	7.176	(0.936)	272125	50.0000	45.88
44	Dibromomethane	93	5.557	5.557	(1.118)	183392	50.0000	45.86
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	235600	50.0000	41.20
61	Ethylbenzene	106	7.799	7.799	(1.017)	371688	50.0000	42.17
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	102822	50.0000	41.71
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1038705	50.0000	40.53
62	m,p-Xylenes	106	7.907	7.907	(1.031)	890486	100.000	84.15
17	Methylene Chloride	84	2.305	2.305	(0.550)	303593	50.0000	49.06
87	n-Butylbenzene	91	9.998	9.998	(1.035)	731188	50.0000	40.09
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1216787	50.0000	40.30
92	Naphthalene	128	11.546	11.546	(1.195)	152719	50.0000	46.27
63	o-Xylene	106	8.243	8.243	(1.075)	447984	50.0000	43.35
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	958531	50.0000	38.76
64	Styrene	104	8.258	8.258	(1.077)	798852	50.0000	45.18
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	680800	50.0000	39.07
56	Tetrachloroethene	164	6.933	6.933	(0.904)	209713	50.0000	39.99
50	Toluene	91	6.446	6.446	(0.840)	1151574	50.0000	42.86
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	264379	50.0000	45.15
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	410118	50.0000	47.09
38	Trichloroethene	130	5.214	5.214	(1.049)	284429	50.0000	43.66
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	351293	50.0000	42.75
5	Vinyl Chloride	62	1.145	1.145	(0.273)	327079	50.0000	44.80

QC Flag Legend

M - Compound response manually integrated.

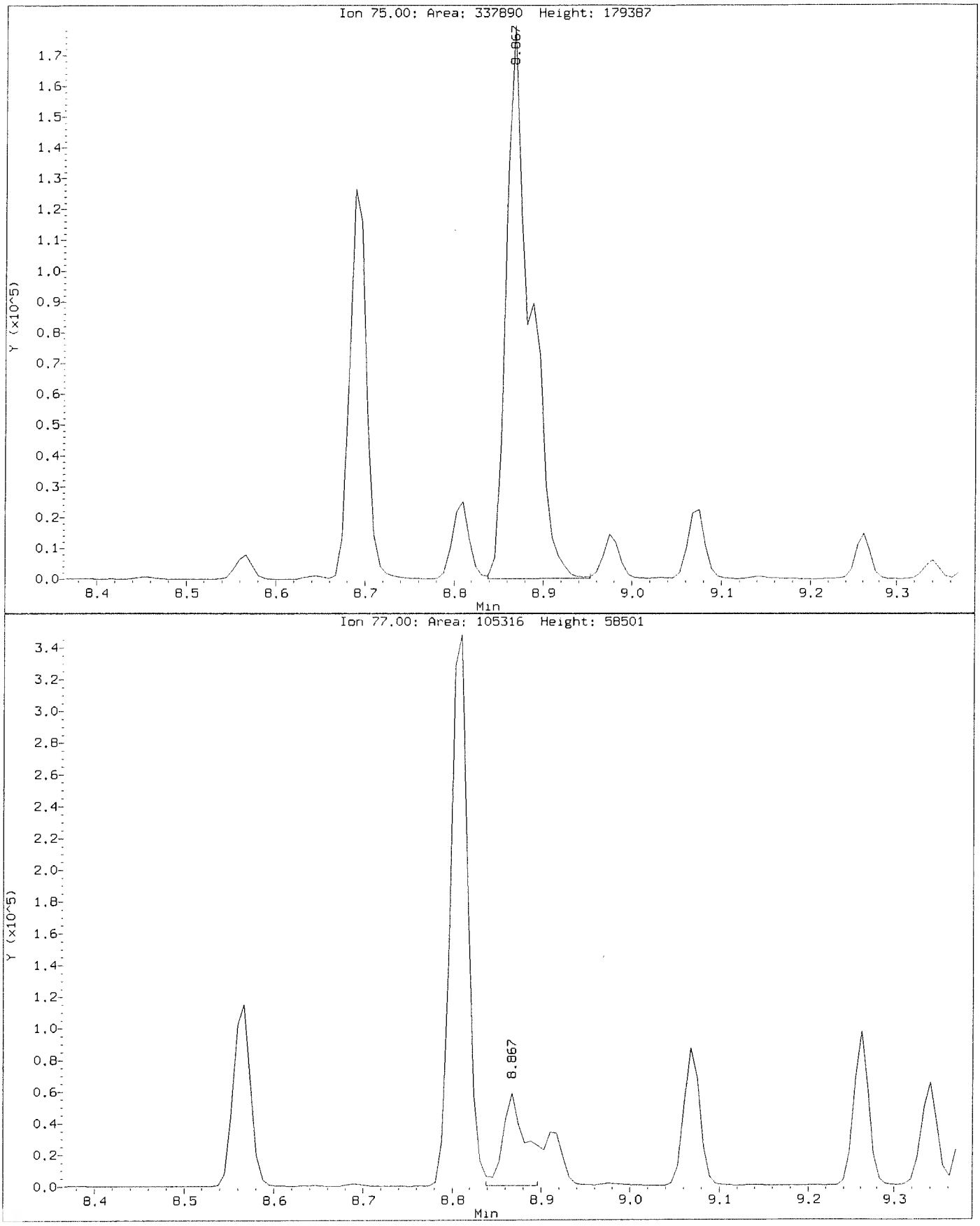


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Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

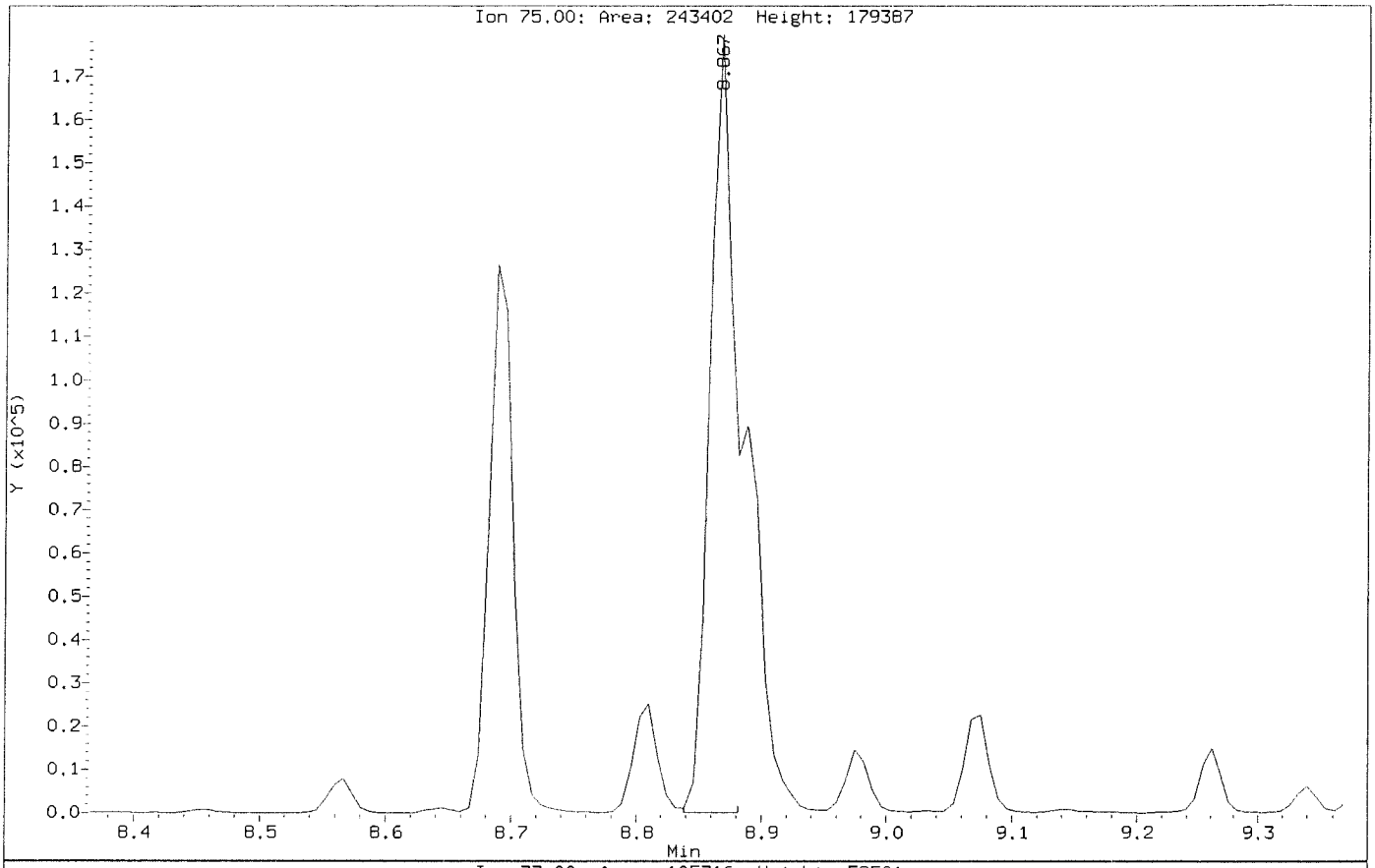
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Instrument: voa6.i
Client Sample ID: VSTD050

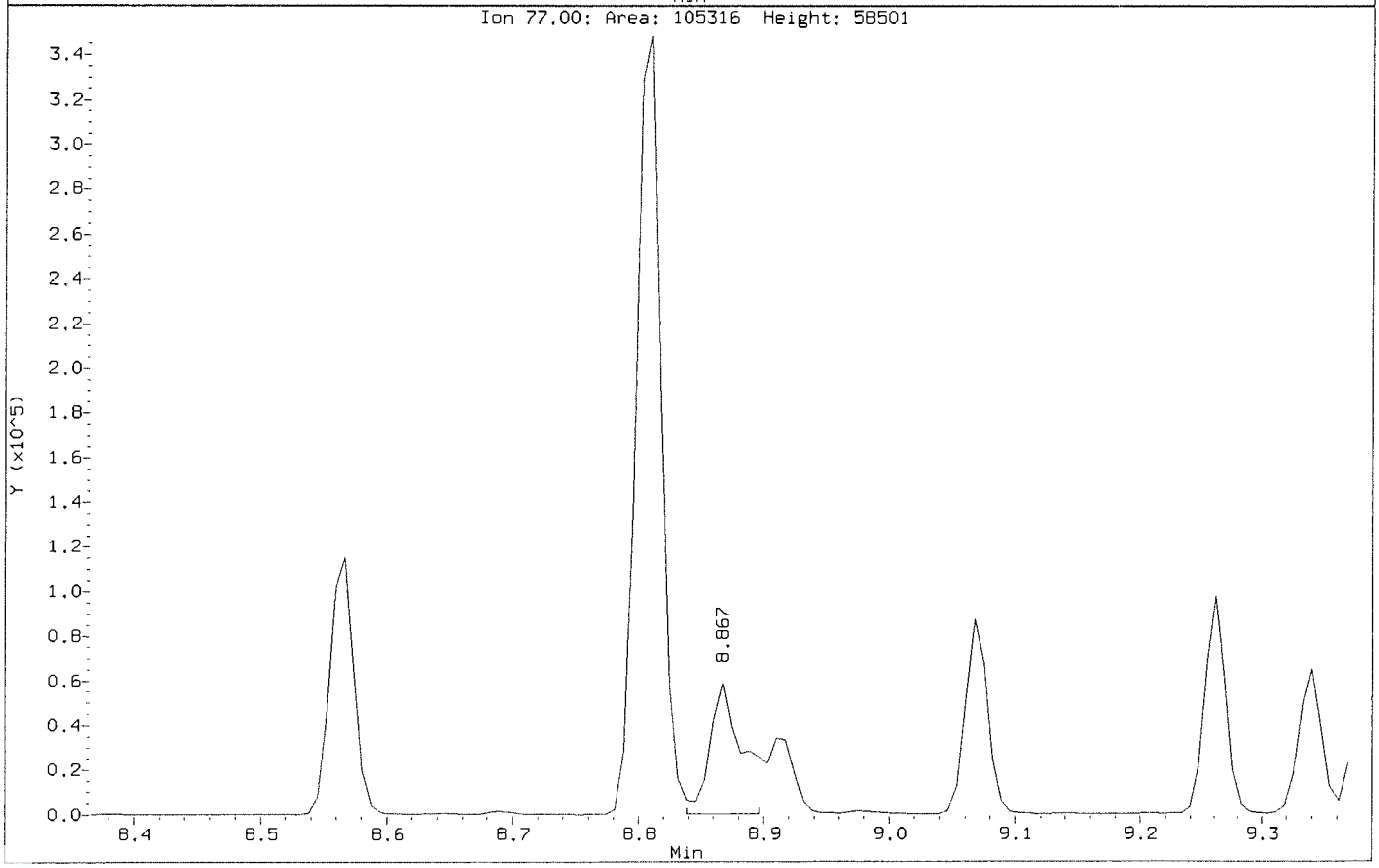
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092408.D
Injection Date: 24-SEP-2020 14:21
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092409.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092409.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 24-SEP-2020 14:45
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

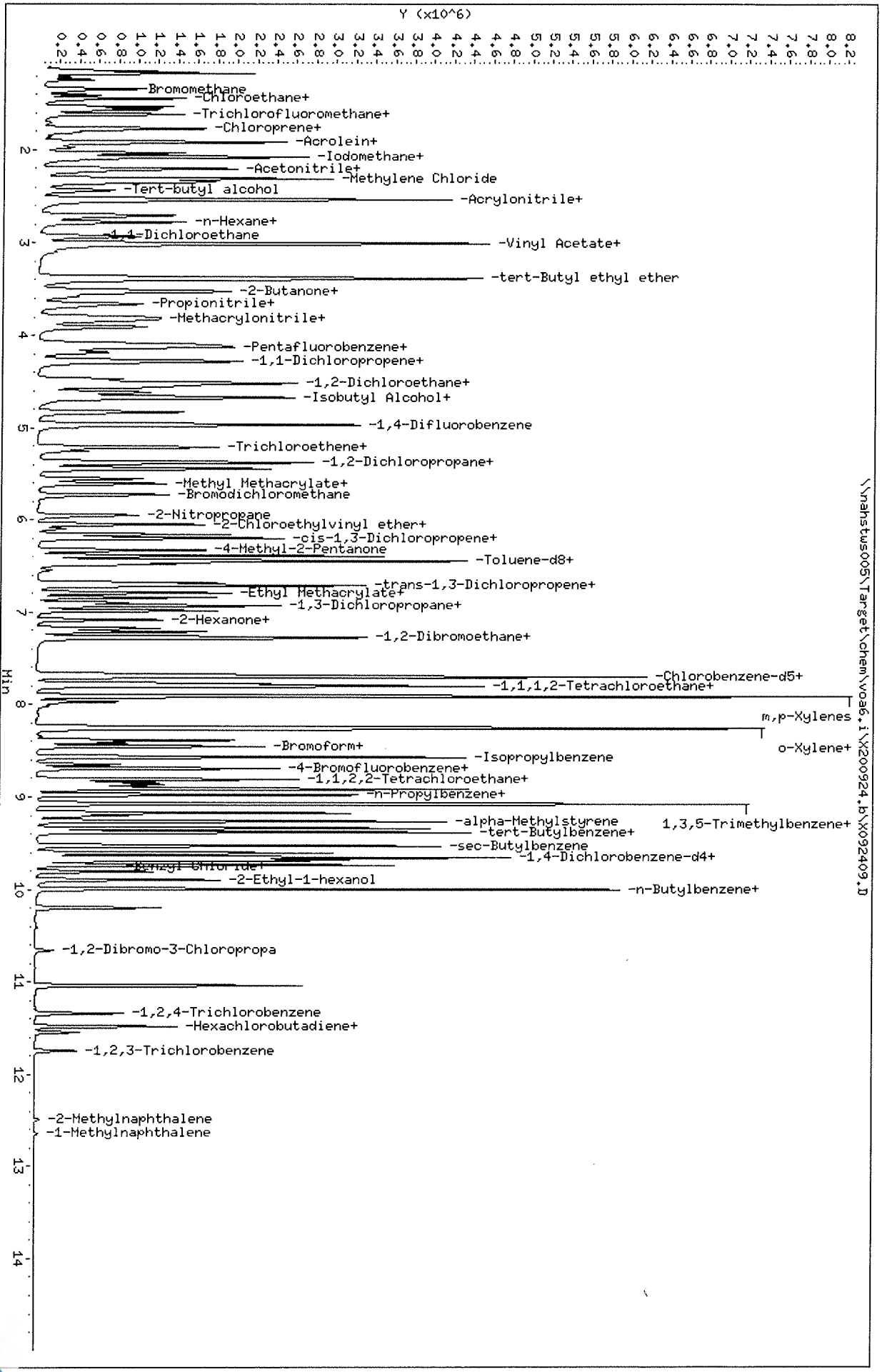
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	546812	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	873571	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	810573	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	336603	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	537287	100.000	95.62
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	594732	100.000	96.75
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1988260	100.000	93.29
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	706326	100.000	100.80
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	538620	100.000	95.88
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	828059	100.000	98.32
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	532212	100.000	89.41
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	433386	100.000	90.78
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1082912	100.000	94.79
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	479537	100.000	97.53
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	781119	100.000	97.19
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	119849	100.000	92.12
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	460144	100.000	93.45(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	247364	100.000	95.77
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1944092	100.000	97.02
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	36517	100.000	89.90
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	516275	100.000	91.65
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	885366	100.000	94.45

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092409.D Page 2
Report Date: 13-Oct-2020 11:23

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	692994	100.000	92.00
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	624040	100.000	96.47
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1952542	100.000	98.23
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	1045261	100.000	96.54
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	889978	100.000	90.12
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1008581	100.000	93.80
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	819698	100.000	95.49
24	2-Butanone	43	3.581	3.581	(0.855)	417435	200.000	209.13(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	1648682	100.000	94.26
52	2-Hexanone	43	7.090	7.090	(0.924)	693153	200.000	192.85
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1878301	100.000	94.32
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1988284	100.000	99.17
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	1045952	200.000	183.82
10	Acetone	43	1.976	1.976	(0.472)	255829	200.000	200.90(A)
37	Benzene	78	4.519	4.519	(0.909)	2385190	100.000	95.46
74	Bromobenzene	156	8.810	8.810	(0.911)	651117	100.000	95.72
29	Bromochloromethane	128	3.803	3.803	(0.908)	312045	100.000	91.31
39	Bromodichloromethane	83	5.729	5.729	(1.153)	761611	100.000	96.13
66	Bromoform	173	8.416	8.416	(1.097)	347277	100.000	98.08
6	Bromomethane	94	1.346	1.346	(0.321)	446857	100.000	101.69
19	Carbon Disulfide	76	2.076	2.076	(0.496)	3373538	200.000	198.64
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	697129	100.000	99.76
59	Chlorobenzene	112	7.699	7.699	(1.004)	1517748	100.000	92.03
7	Chloroethane	64	1.403	1.403	(0.335)	407389	100.000	95.10
28	Chloroform	83	3.910	3.910	(0.933)	1002276	100.000	94.56
3	Chloromethane	50	1.081	1.081	(0.258)	754195	100.000	100.72
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	637736	100.000	95.19
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	968365	100.000	96.62
55	Dibromochloromethane	129	7.176	7.176	(0.936)	550586	100.000	95.05
44	Dibromomethane	93	5.558	5.558	(1.118)	359271	100.000	93.66
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	565982	100.000	99.24
61	Ethylbenzene	106	7.800	7.800	(1.017)	812673	100.000	94.40
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	246513	100.000	102.01
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2411893	100.000	96.36
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1946449	200.000	188.34
17	Methylene Chloride	84	2.306	2.306	(0.550)	605902	100.000	101.96
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1770652	100.000	102.08
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2876371	100.000	100.17
92	Naphthalene	128	11.546	11.546	(1.194)	292674	100.000	93.24
63	o-Xylene	106	8.244	8.244	(1.075)	955661	100.000	94.69
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2338282	100.000	99.42
64	Styrene	104	8.258	8.258	(1.077)	1628033	100.000	94.29
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1601570	100.000	96.66
56	Tetrachloroethene	164	6.933	6.933	(0.904)	489193	100.000	95.52
50	Toluene	91	6.453	6.453	(0.841)	2417385	100.000	92.13
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	548910	100.000	96.90
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	812915	100.000	97.32
38	Trichloroethene	130	5.214	5.214	(1.049)	604179	100.000	96.69
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	806123	100.000	101.40
5	Vinyl Chloride	62	1.145	1.145	(0.273)	730234	100.000	103.38

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

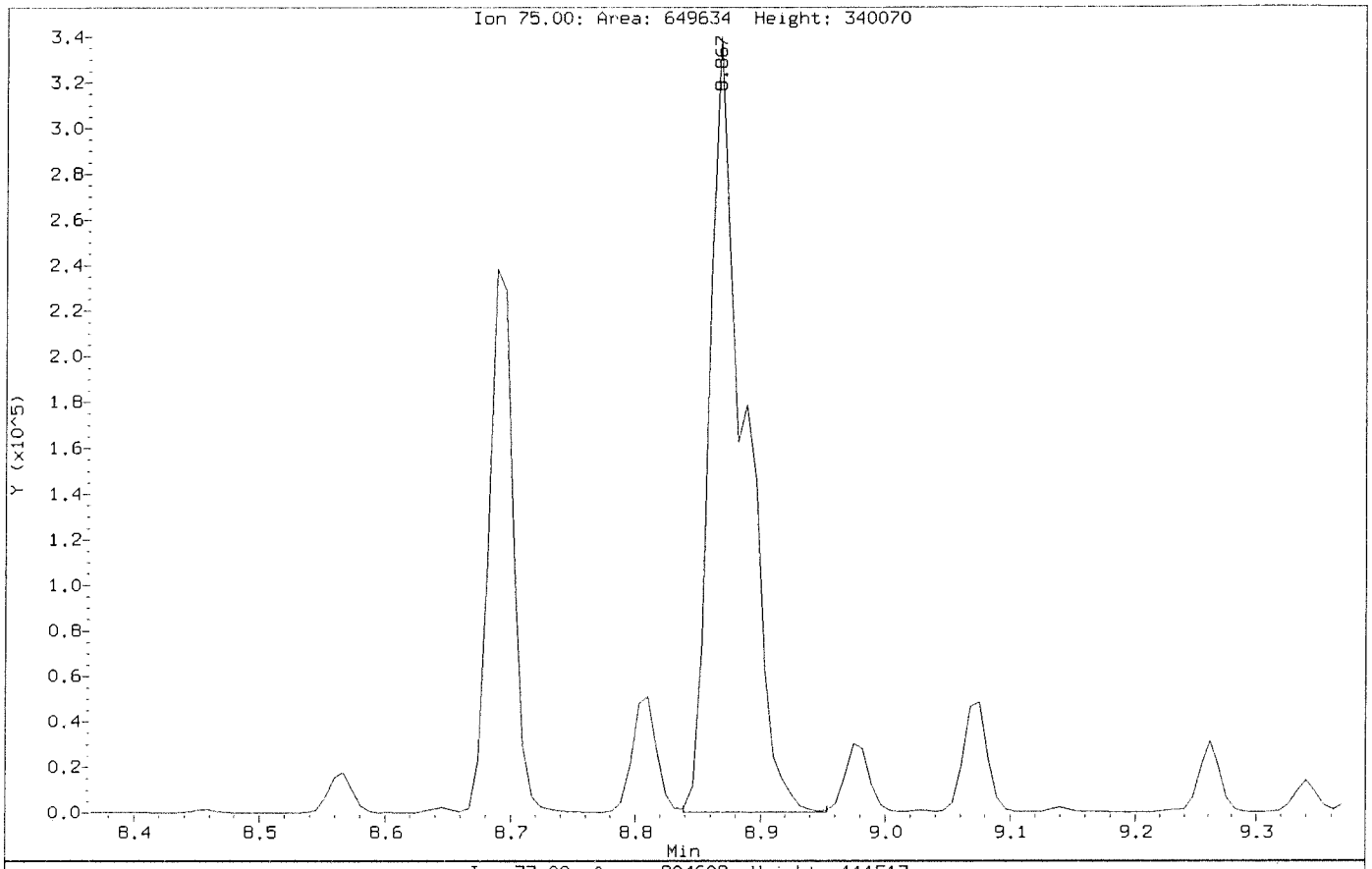


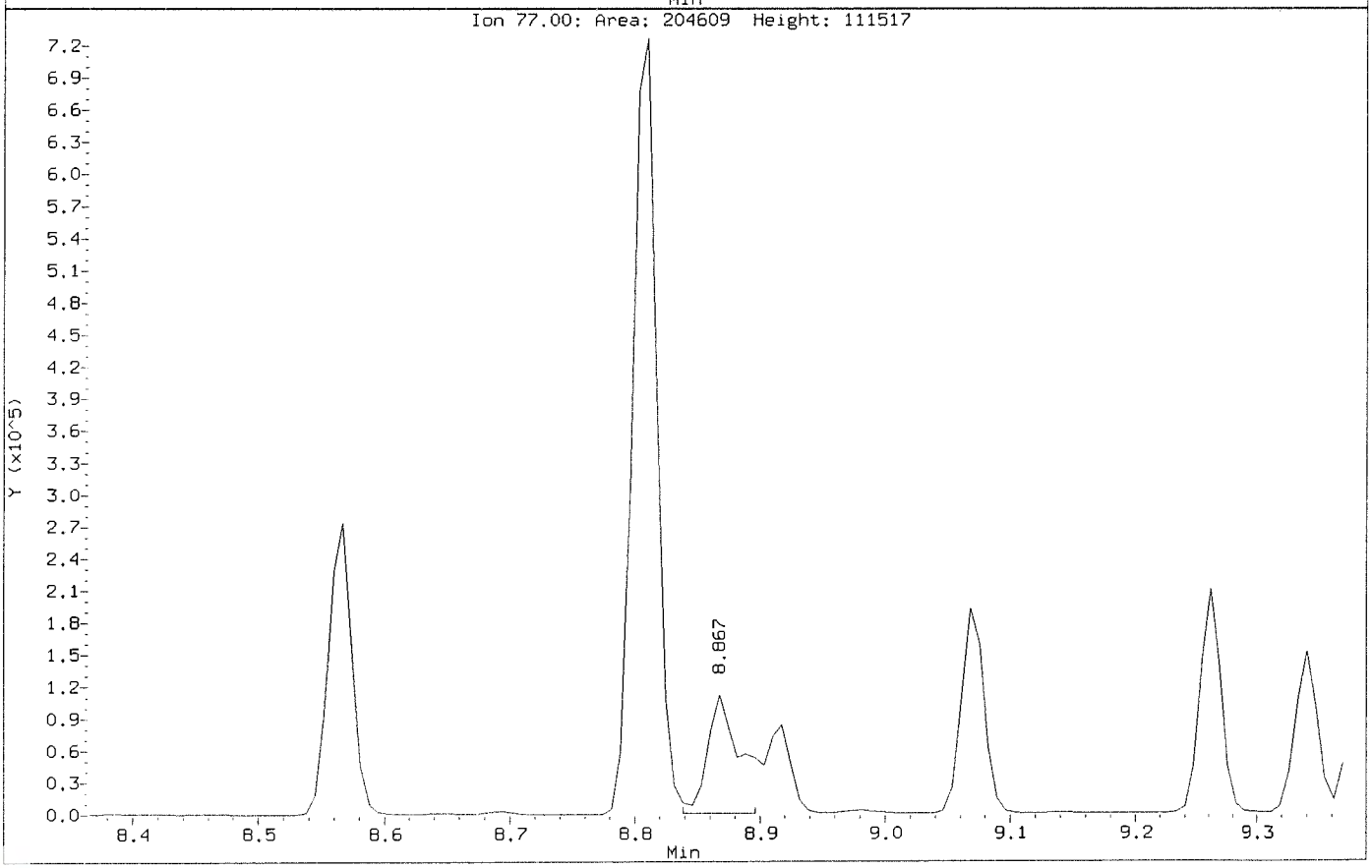
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Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092409.D
Injection Date: 24-SEP-2020 14:45
Instrument: voa6.i
Client Sample ID: VSTD100

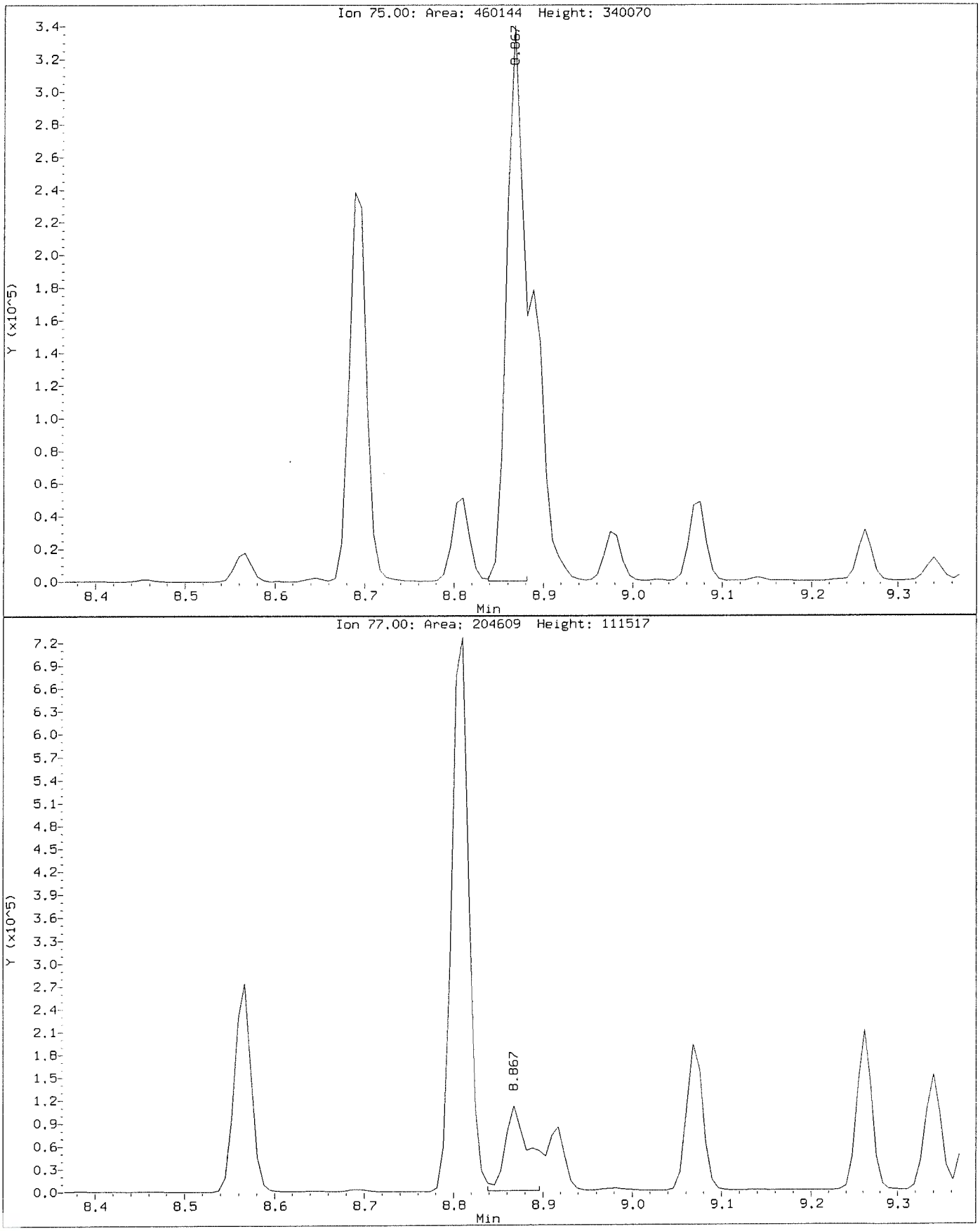
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





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Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092410.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092410.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 24-SEP-2020 15:09
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:45 Cal File: X092409.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

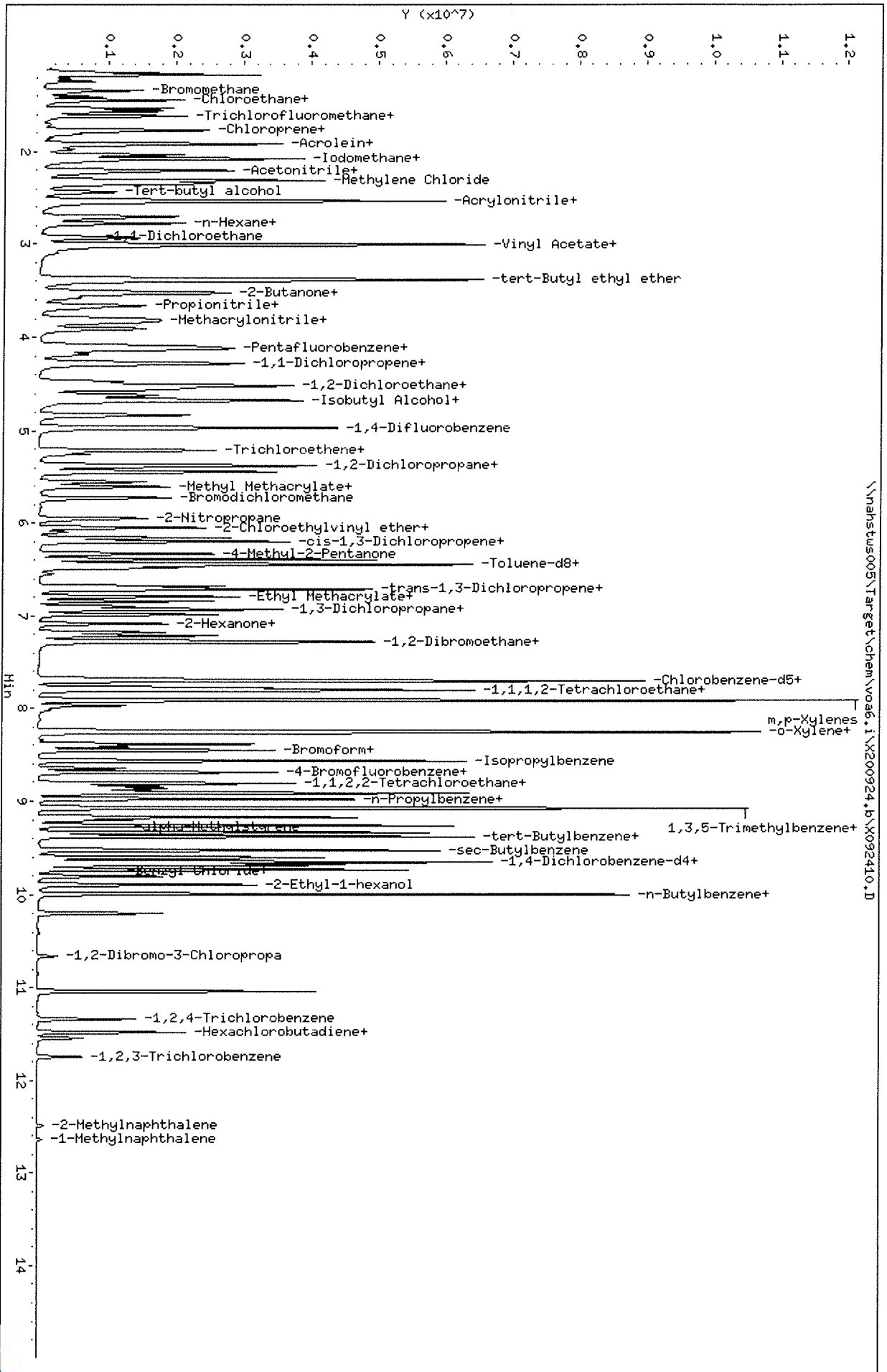
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	531920	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	840978	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	779079	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	329958	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	770629	150.000	140.98
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	856168	150.000	143.18
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2823072	150.000	137.82
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1011330	150.000	150.58
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	783989	150.000	145.21
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1209503	150.000	147.63
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	804309	150.000	137.84
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	627933	150.000	136.85
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1562221	150.000	140.58
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	699764	150.000	146.31
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1139618	150.000	147.30
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	196114	150.000	153.78
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	678354	150.000	140.54(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	386588	150.000	151.87
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	2817092	150.000	143.42
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	57707	150.000	144.92
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	761017	150.000	140.56
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1308650	150.000	142.42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1012585	150.000	139.64
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	904655	150.000	145.27
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	2822481	150.000	144.86
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1521632	150.000	143.37
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1302913	150.000	137.27
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1489597	150.000	141.33
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	1188510	150.000	142.34
24	2-Butanone	43	3.581	3.581	(0.855)	625735	300.000	322.26(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	2388112	150.000	139.28
52	2-Hexanone	43	7.090	7.090	(0.924)	1024572	300.000	296.58(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	2725898	150.000	139.64
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2920943	150.000	148.63
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1567164	300.000	286.56(A)
10	Acetone	43	1.976	1.976	(0.472)	368697	300.000	300.09(A)
37	Benzene	78	4.519	4.519	(0.909)	3448252	150.000	143.36
74	Bromobenzene	156	8.810	8.810	(0.911)	951989	150.000	142.77
29	Bromochloromethane	128	3.803	3.803	(0.908)	454072	150.000	136.59
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1108506	150.000	145.34
66	Bromoform	173	8.416	8.416	(1.097)	517500	150.000	152.06
6	Bromomethane	94	1.338	1.338	(0.320)	643333	150.000	150.62
19	Carbon Disulfide	76	2.076	2.076	(0.496)	4895270	300.000	296.32(A)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	1027004	150.000	152.66
59	Chlorobenzene	112	7.699	7.699	(1.004)	2206389	150.000	139.20
7	Chloroethane	64	1.403	1.403	(0.335)	578170	150.000	138.75
28	Chloroform	83	3.910	3.910	(0.933)	1456902	150.000	141.30
3	Chloromethane	50	1.081	1.081	(0.258)	1119689	150.000	153.71
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	926983	150.000	142.24
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1418593	150.000	147.03
55	Dibromochloromethane	129	7.176	7.176	(0.936)	806662	150.000	144.89
44	Dibromomethane	93	5.558	5.558	(1.118)	521767	150.000	141.30
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	843912	150.000	151.02
61	Ethylbenzene	106	7.800	7.800	(1.017)	1183946	150.000	143.10
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	372303	150.000	154.25
67	Isopropylbenzene	105	8.566	8.566	(1.117)	3498166	150.000	145.41
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2812643	300.000	283.15(A)
17	Methylene Chloride	84	2.305	2.305	(0.550)	861961	150.000	149.44
87	n-Butylbenzene	91	9.999	9.999	(1.034)	2576017	150.000	151.51
73	n-Propylbenzene	91	8.917	8.917	(0.922)	4173432	150.000	148.27
92	Naphthalene	128	11.546	11.546	(1.194)	477401	150.000	155.15
63	o-Xylene	106	8.244	8.244	(1.075)	1381156	150.000	142.38
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	3408972	150.000	147.86
64	Styrene	104	8.265	8.265	(1.078)	2356658	150.000	142.01
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	2344446	150.000	144.35
56	Tetrachloroethene	164	6.933	6.933	(0.904)	708095	150.000	143.86
50	Toluene	91	6.453	6.453	(0.841)	3514507	150.000	139.36
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	794499	150.000	144.18
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1206197	150.000	150.00
38	Trichloroethene	130	5.207	5.207	(1.048)	882316	150.000	146.68
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1178939	150.000	152.45
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1069212	150.000	155.61

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

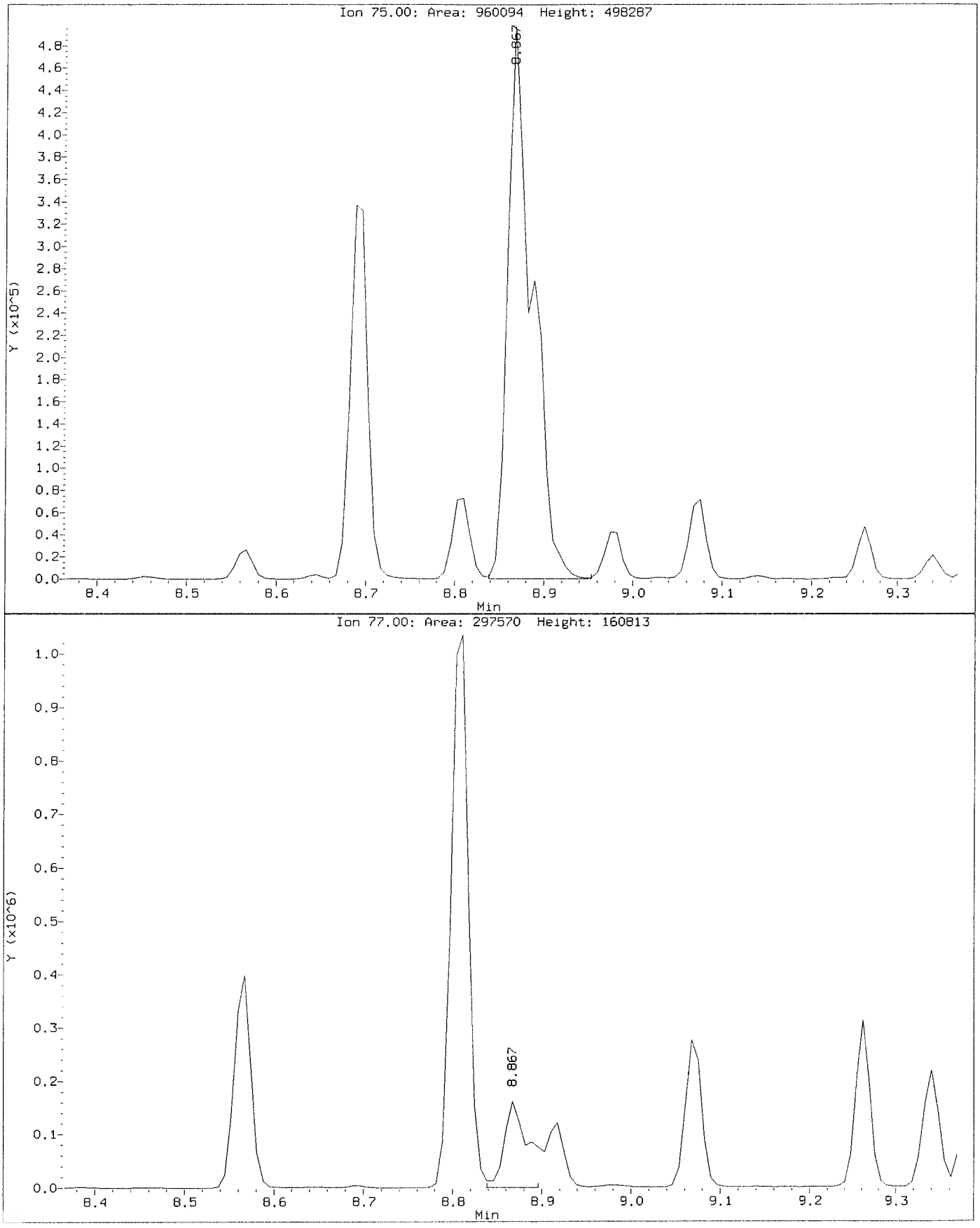


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Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

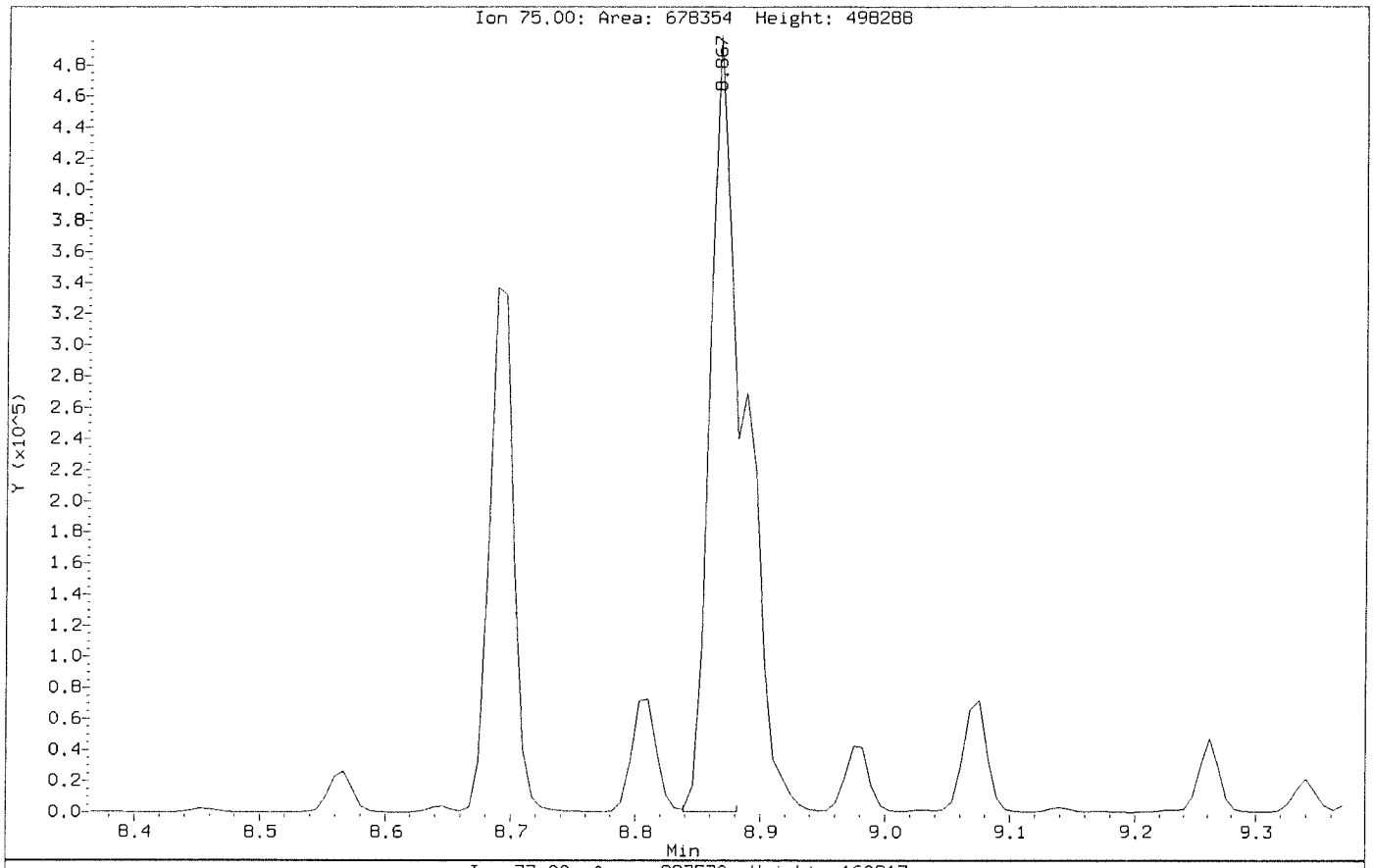
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Instrument: voa6.i
Client Sample ID: VSTD150

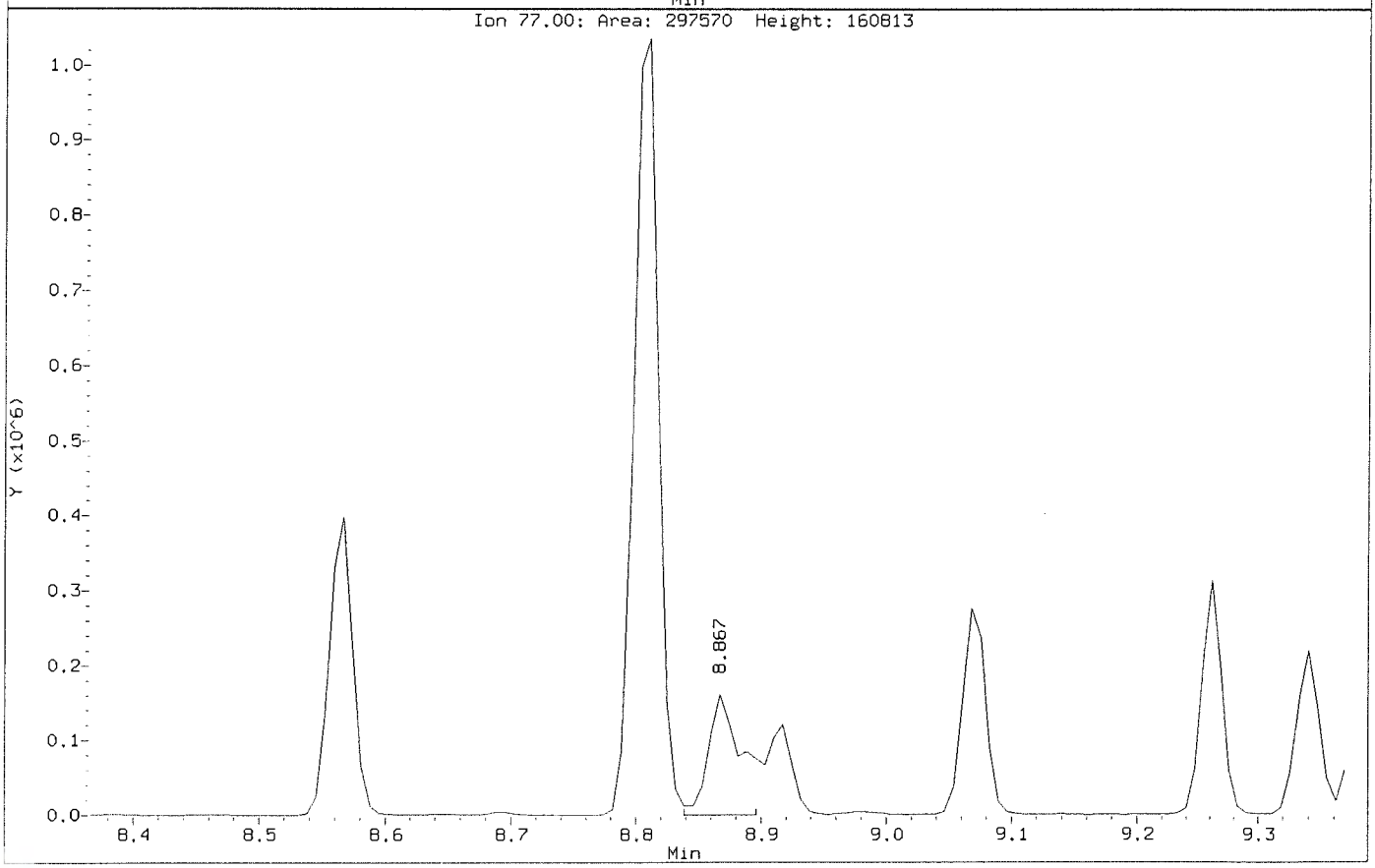
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Injection Date: 24-SEP-2020 15:09
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092411.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092411.D
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Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 15:09 Cal File: X092410.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

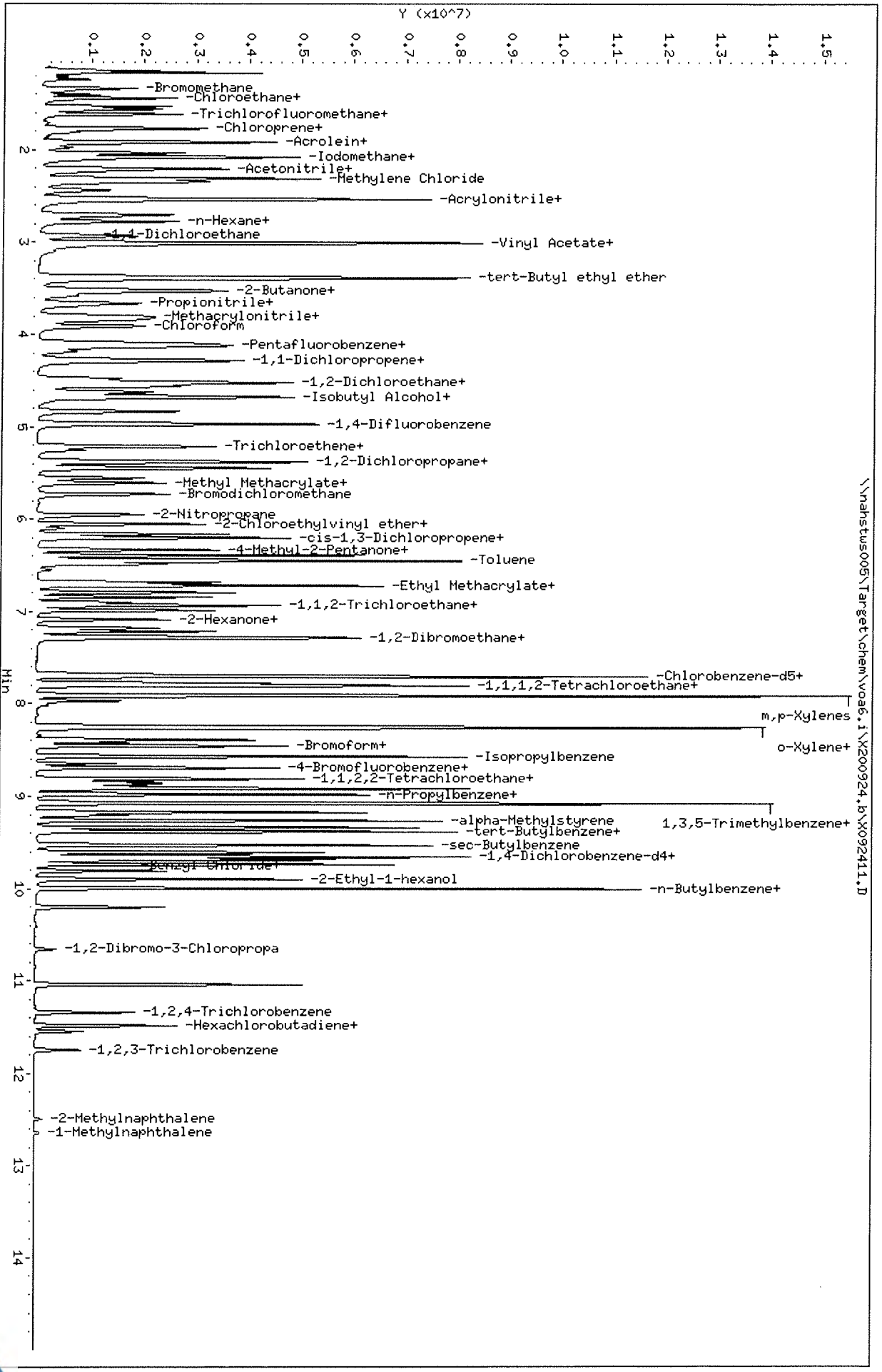
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	514617	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	818151	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	766117	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	319805	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	997974	200.000	188.72
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	1108704	200.000	191.65
$	48 Toluene-d8	98	6.388	6.388	(0.833)	3650737	200.000	181.25
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1311827	200.000	198.89
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1023952	200.000	192.86
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1570020	200.000	198.08
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1009059	200.000	178.42
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	811095	200.000	179.76
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	2021086	200.000	187.99
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	898417	200.000	194.16
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1470799	200.000	195.41
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	252027	200.000	203.90(A)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	845182	200.000	180.66(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	497987	200.000	201.39(A)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	3640675	200.000	191.23
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	75498	200.000	195.63
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	982108	200.000	184.47
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1668003	200.000	187.30

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1311886	200.000	185.97
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1174366	200.000	193.85
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	3615186	200.000	191.44
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1939698	200.000	188.57
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1687479	200.000	180.80
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1908950	200.000	186.87
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	1529599	200.000	189.35
24	2-Butanone	43	3.580	3.580	(0.855)	794870	400.000	423.13(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	3075929	200.000	185.09
52	2-Hexanone	43	7.090	7.090	(0.924)	1315951	400.000	387.37(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	3499907	200.000	184.98
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3720558	200.000	195.33
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2021801	400.000	375.95(A)
10	Acetone	43	1.976	1.976	(0.472)	468128	400.000	395.42(A)
37	Benzene	78	4.519	4.519	(0.909)	4491768	200.000	191.96
74	Bromobenzene	156	8.809	8.809	(0.911)	1227148	200.000	189.89
29	Bromochloromethane	128	3.803	3.803	(0.908)	585962	200.000	182.19
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1448888	200.000	195.26
66	Bromoform	173	8.416	8.416	(1.097)	667425	200.000	199.43
6	Bromomethane	94	1.338	1.338	(0.320)	822601	200.000	199.15
19	Carbon Disulfide	76	2.076	2.076	(0.496)	6314905	400.000	395.11(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1334523	200.000	203.90(A)
59	Chlorobenzene	112	7.699	7.699	(1.004)	2881341	200.000	184.87
7	Chloroethane	64	1.403	1.403	(0.335)	746987	200.000	185.30
28	Chloroform	83	3.910	3.910	(0.933)	1888897	200.000	189.35
3	Chloromethane	50	1.081	1.081	(0.258)	1519539	200.000	215.62(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	1197643	200.000	189.96
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1863781	200.000	198.57
55	Dibromochloromethane	129	7.176	7.176	(0.936)	1046893	200.000	191.23
44	Dibromomethane	93	5.557	5.557	(1.118)	676562	200.000	188.33
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1091943	200.000	201.27(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1537966	200.000	189.03
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	468444	200.000	197.29
67	Isopropylbenzene	105	8.566	8.566	(1.117)	4482158	200.000	189.47
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3653571	400.000	374.04(A)
17	Methylene Chloride	84	2.305	2.305	(0.550)	1112263	200.000	199.56
87	n-Butylbenzene	91	9.999	9.999	(1.034)	3292137	200.000	199.77
73	n-Propylbenzene	91	8.917	8.917	(0.922)	5360526	200.000	196.50
92	Naphthalene	128	11.546	11.546	(1.194)	612632	200.000	205.43(A)
63	o-Xylene	106	8.244	8.244	(1.075)	1788902	200.000	187.54
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	4353469	200.000	194.82
64	Styrene	104	8.265	8.265	(1.078)	3107739	200.000	190.44
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	2997110	200.000	190.39
56	Tetrachloroethene	164	6.933	6.933	(0.904)	917390	200.000	189.53
50	Toluene	91	6.453	6.453	(0.841)	4536037	200.000	182.92
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	1022675	200.000	191.84
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1572450	200.000	201.00(A)
38	Trichloroethene	130	5.214	5.214	(1.049)	1150173	200.000	196.54
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1512632	200.000	202.18(A)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1412833	200.000	212.53(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

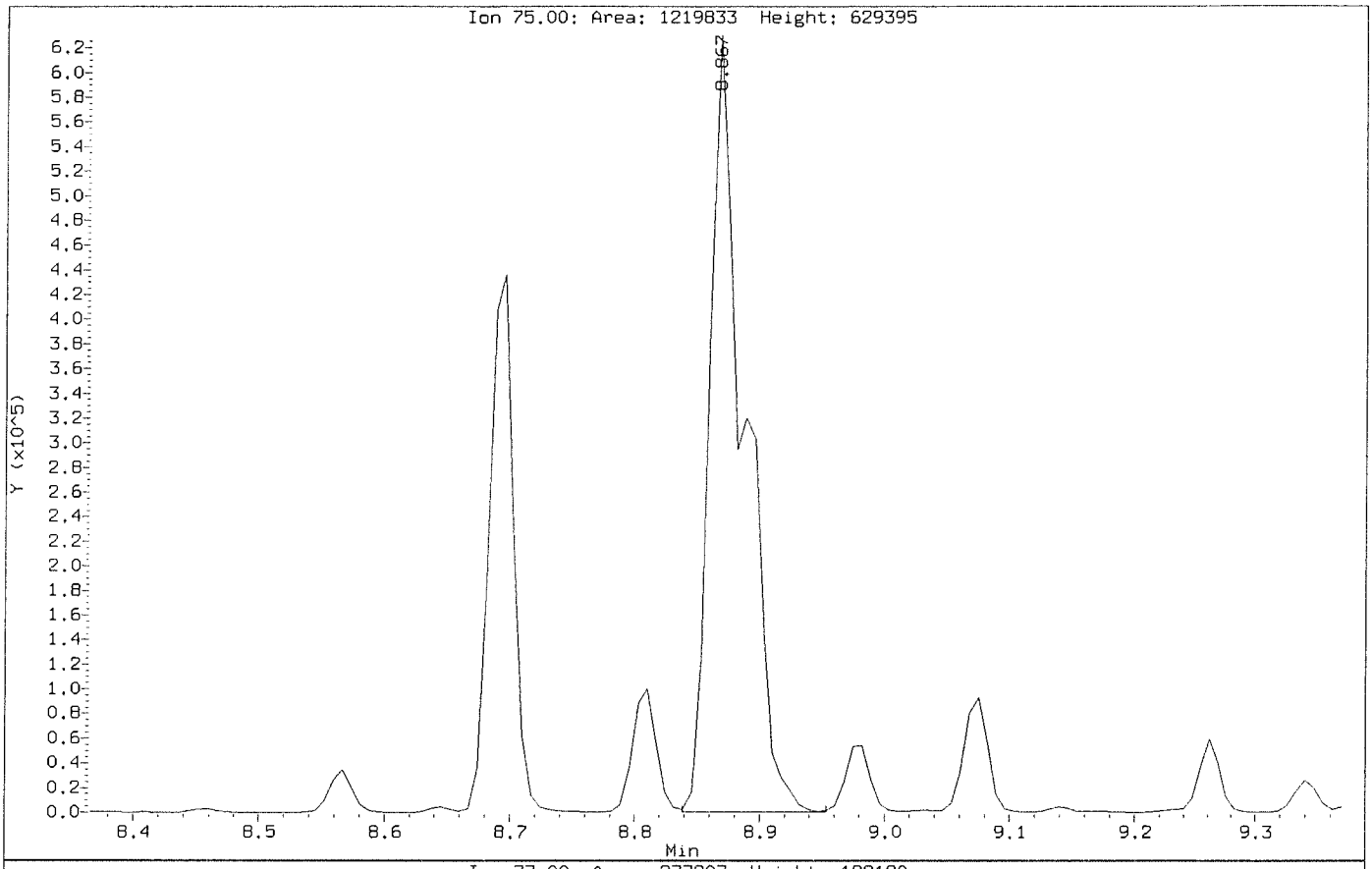


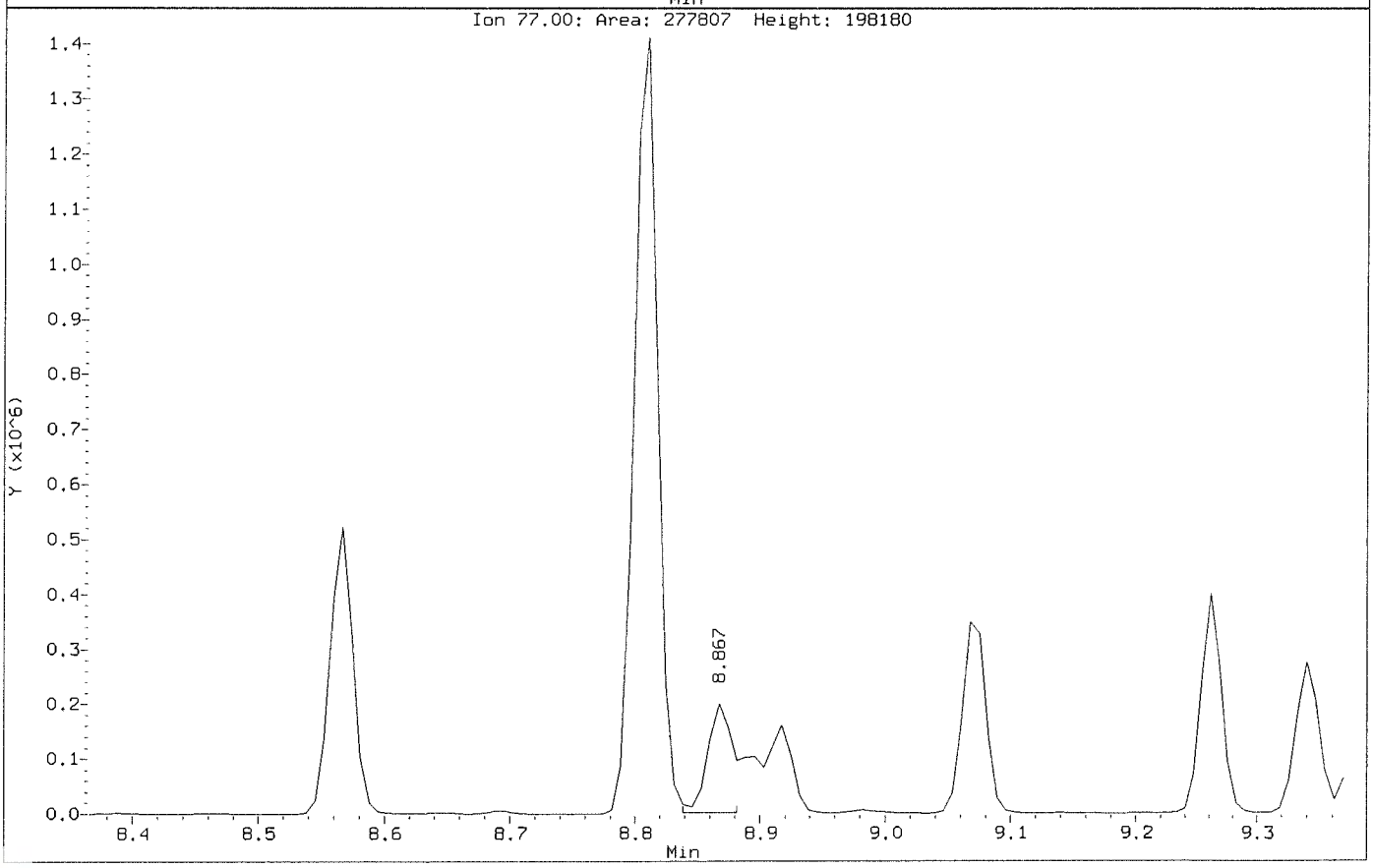
Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092411.D
Date : 24-SEP-2020 15:33
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092411.D
Injection Date: 24-SEP-2020 15:33
Instrument: voa6.i
Client Sample ID: VSTD200

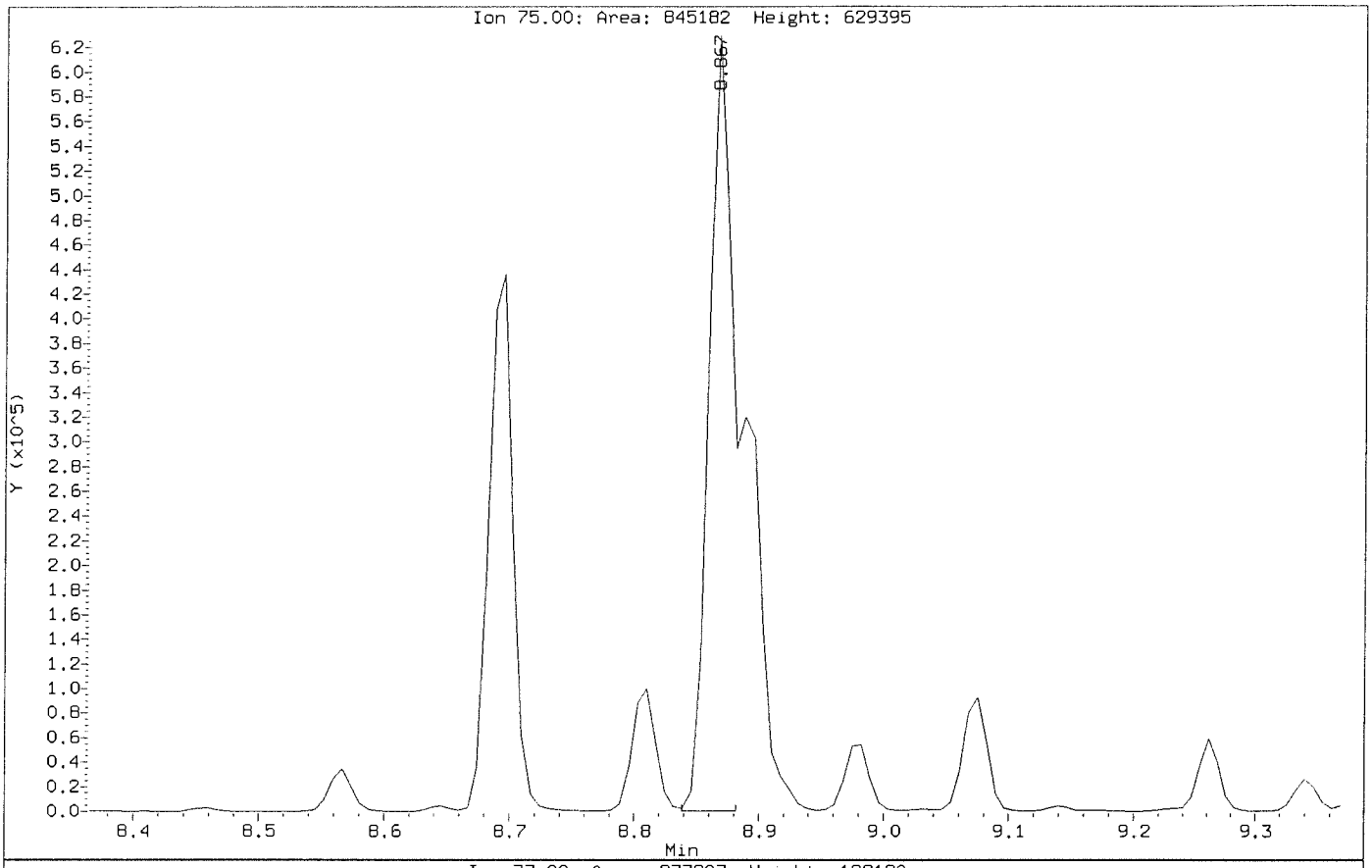
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

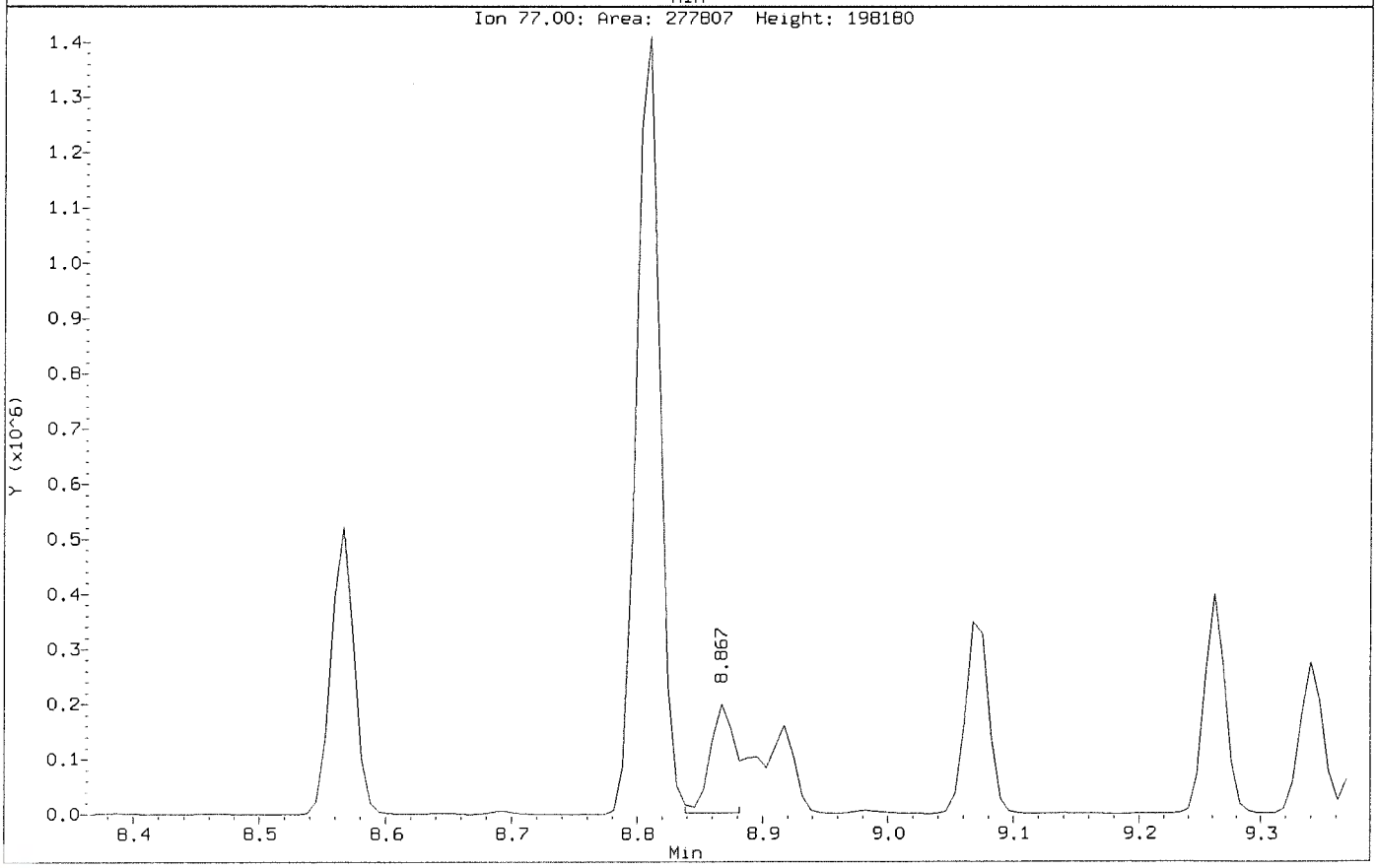




Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092411.D
Injection Date: 24-SEP-2020 15:33
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092414.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 24-SEP-2020 16:45
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;2;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 15:33 Cal File: X092411.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

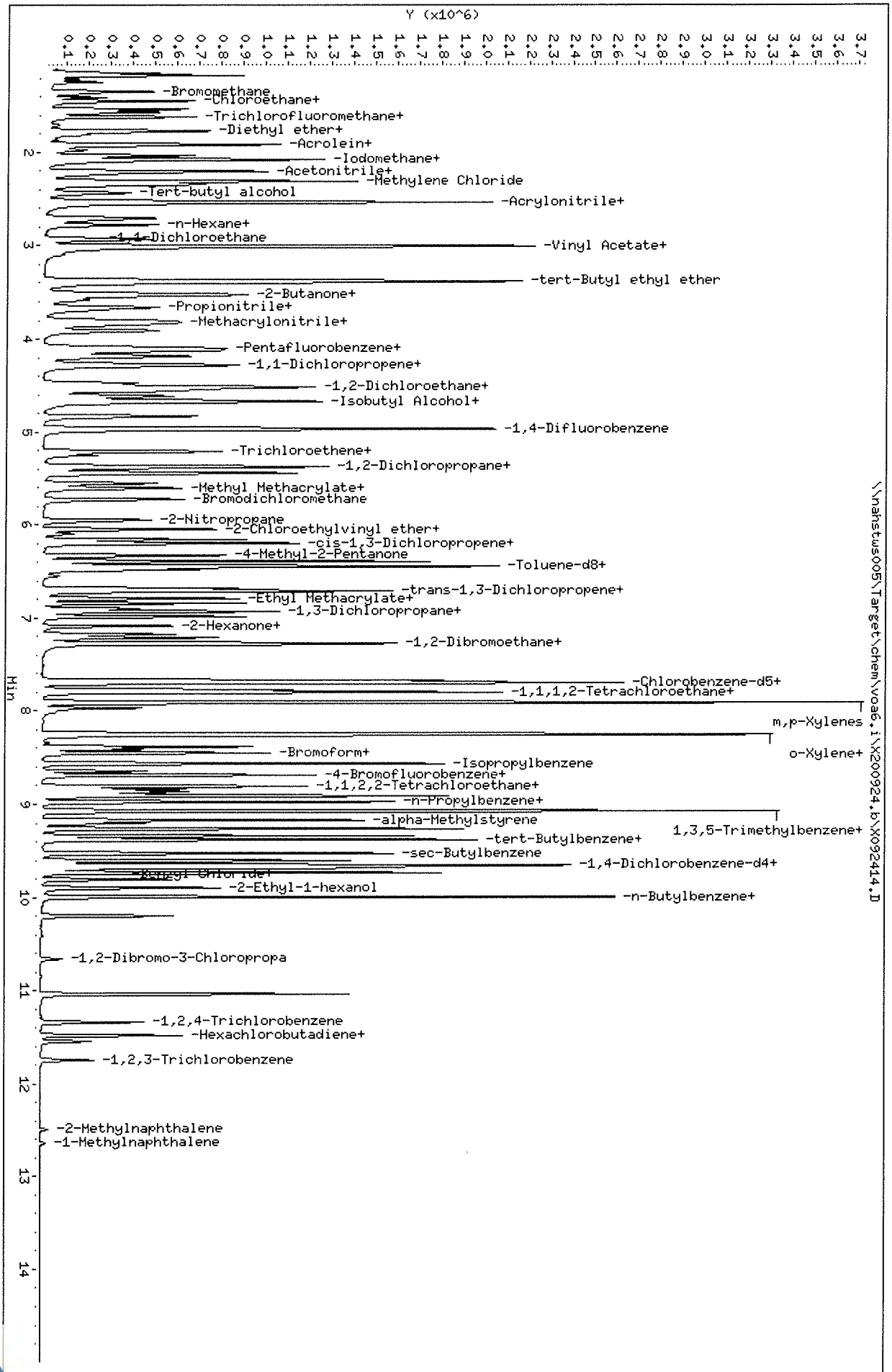
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	555853	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	880879	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	809143	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	340955	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	270370	47.3353	47.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	292397	46.7950	46.79
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	992617	46.6609	46.66
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	357664	50.7296	50.72
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	255261	45.5235	45.52
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	372773	43.5426	43.54
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	269578	44.7109	44.71
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	212341	44.5585	44.55
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	513975	44.2622	44.26
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	215034	43.0259	43.02
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	342196	42.2270	42.22
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	67558	51.2677	51.26
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	237004	47.5196	47.51(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	127322	49.3405	49.34
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	893102	44.0033	44.00
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	18502	44.9686	44.96
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	254893	45.3327	45.33
88 1,2-Dichlorobenzene	146	9.992	9.999	(1.034)	427645	45.0424	45.04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	342758	45.1289	45.12
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	300814	46.1197	46.11
75	1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	869784	43.2026	43.20
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.994)	491942	44.8587	44.85
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	440493	44.6861	44.68
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	480988	44.1640	44.16
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	389339	44.6220	44.62
24	2-Butanone	43	3.581	3.580	(0.855)	219196	108.029	108.02
76	2-Chlorotoluene	91	8.974	8.981	(0.929)	763308	43.0841	43.08
52	2-Hexanone	43	7.090	7.090	(0.924)	341403	95.1537	95.15
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	871870	43.2233	43.22
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	839031	41.3173	41.31
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	518916	91.3618	91.36
10	Acetone	43	1.976	1.976	(0.472)	144721	109.546	109.54
37	Benzene	78	4.519	4.519	(0.909)	1129724	44.8428	44.84
74	Bromobenzene	156	8.810	8.809	(0.912)	314637	45.6672	45.66
29	Bromochloromethane	128	3.803	3.803	(0.908)	152577	43.9222	43.92
39	Bromodichloromethane	83	5.729	5.729	(1.153)	364239	45.5934	45.59
66	Bromoform	173	8.416	8.416	(1.097)	169090	47.8404	47.84
6	Bromomethane	94	1.346	1.338	(0.321)	214339	47.8614	47.86
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1550506	89.8154	89.81
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	295499	41.9357	41.93
59	Chlorobenzene	112	7.699	7.699	(1.004)	717662	43.5977	43.59
7	Chloroethane	64	1.410	1.403	(0.337)	187221	42.9974	42.99
28	Chloroform	83	3.917	3.910	(0.935)	480173	44.5656	44.56
3	Chloromethane	50	1.081	1.081	(0.258)	347050	45.5939	45.59
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	305678	44.8873	44.88
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	467703	46.2818	46.28
55	Dibromochloromethane	129	7.176	7.176	(0.936)	263131	45.5092	45.50
44	Dibromomethane	93	5.558	5.557	(1.118)	175762	45.4424	45.44
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	230691	41.0358	41.03
61	Ethylbenzene	106	7.800	7.807	(1.017)	366397	42.6400	42.63
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	107937	45.3302	45.33
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1042703	41.7341	41.73
62	m,p-Xylenes	106	7.907	7.907	(1.031)	899893	87.2295	87.22
17	Methylene Chloride	84	2.306	2.305	(0.550)	293086	48.1510	48.15
87	n-Butylbenzene	91	9.999	9.999	(1.035)	744175	42.3576	42.35
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1231158	42.3313	42.33
92	Naphthalene	128	11.546	11.546	(1.195)	165067	51.9179	51.91
63	o-Xylene	106	8.244	8.244	(1.075)	448211	44.4912	44.49
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	959537	40.2778	40.27
64	Styrene	104	8.258	8.265	(1.077)	794863	46.1195	46.11
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	686333	40.8964	40.89
56	Tetrachloroethene	164	6.933	6.933	(0.904)	211119	41.2989	41.29
50	Toluene	91	6.446	6.453	(0.840)	1141578	43.5879	43.58
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	260688	45.2738	45.27
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	394997	46.8967	46.89
38	Trichloroethene	130	5.214	5.214	(1.049)	279338	44.3352	44.33
8	Trichlorofluoromethane	101	1.568	1.560	(0.374)	339177	41.9731	41.97
5	Vinyl Chloride	62	1.145	1.145	(0.273)	314294	43.7725	43.77

QC Flag Legend

M - Compound response manually integrated.

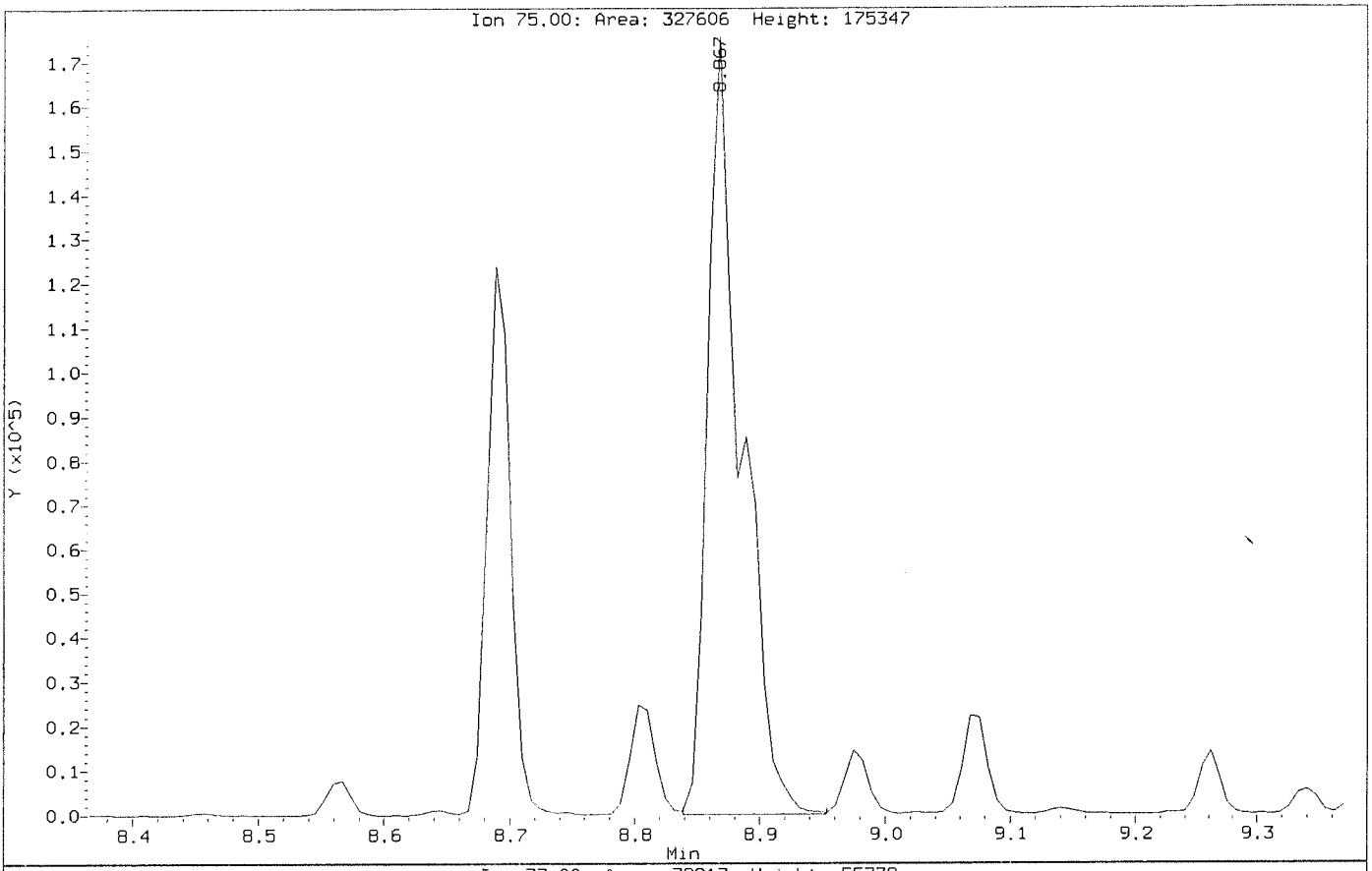


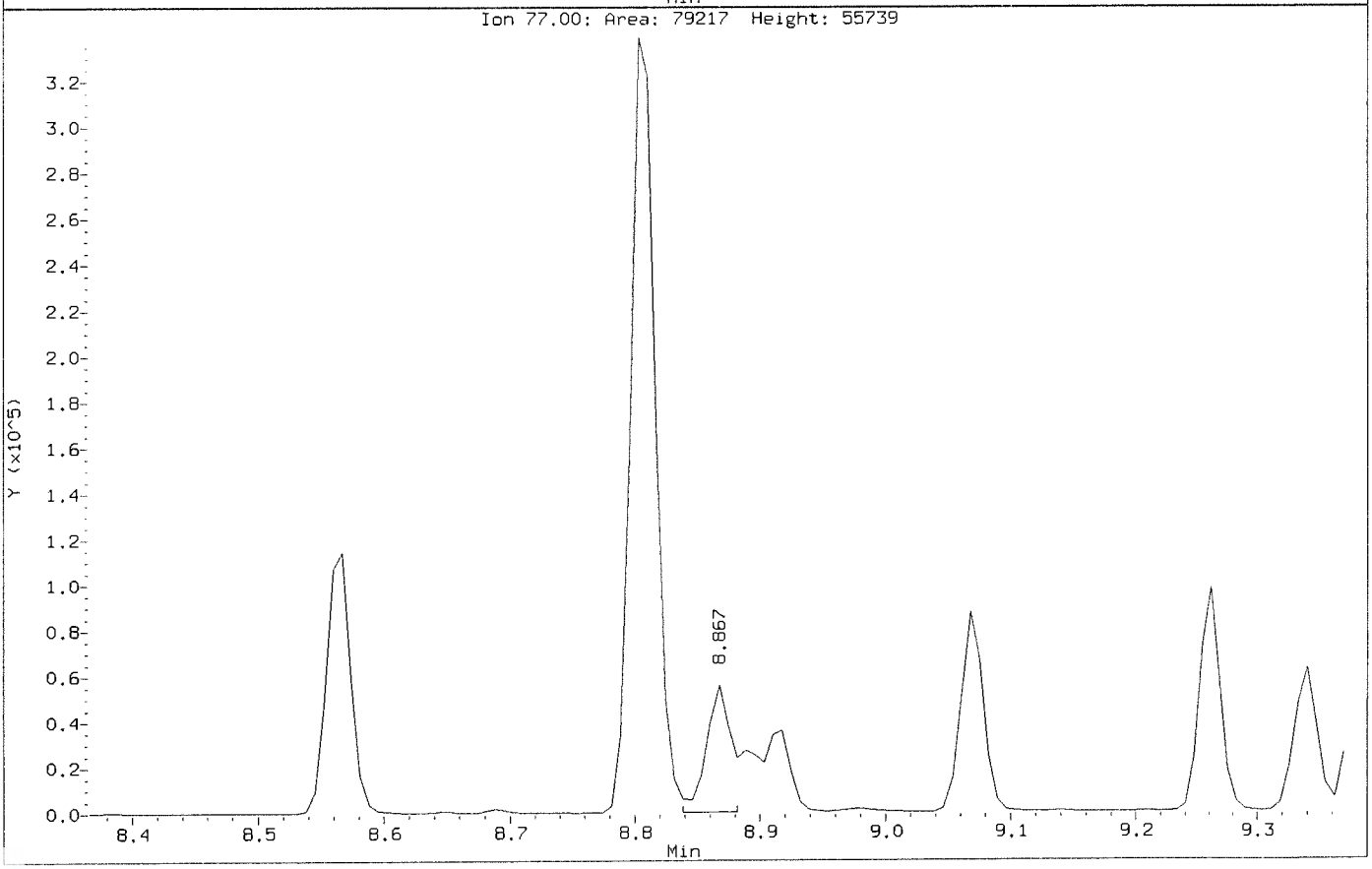
Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092414.D
Date : 24-SEP-2020 16:45
Client ID: ICV
Sample Info: VSTD050;VSTD050;2;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092414.D
Injection Date: 24-SEP-2020 16:45
Instrument: voa6.i
Client Sample ID: ICV

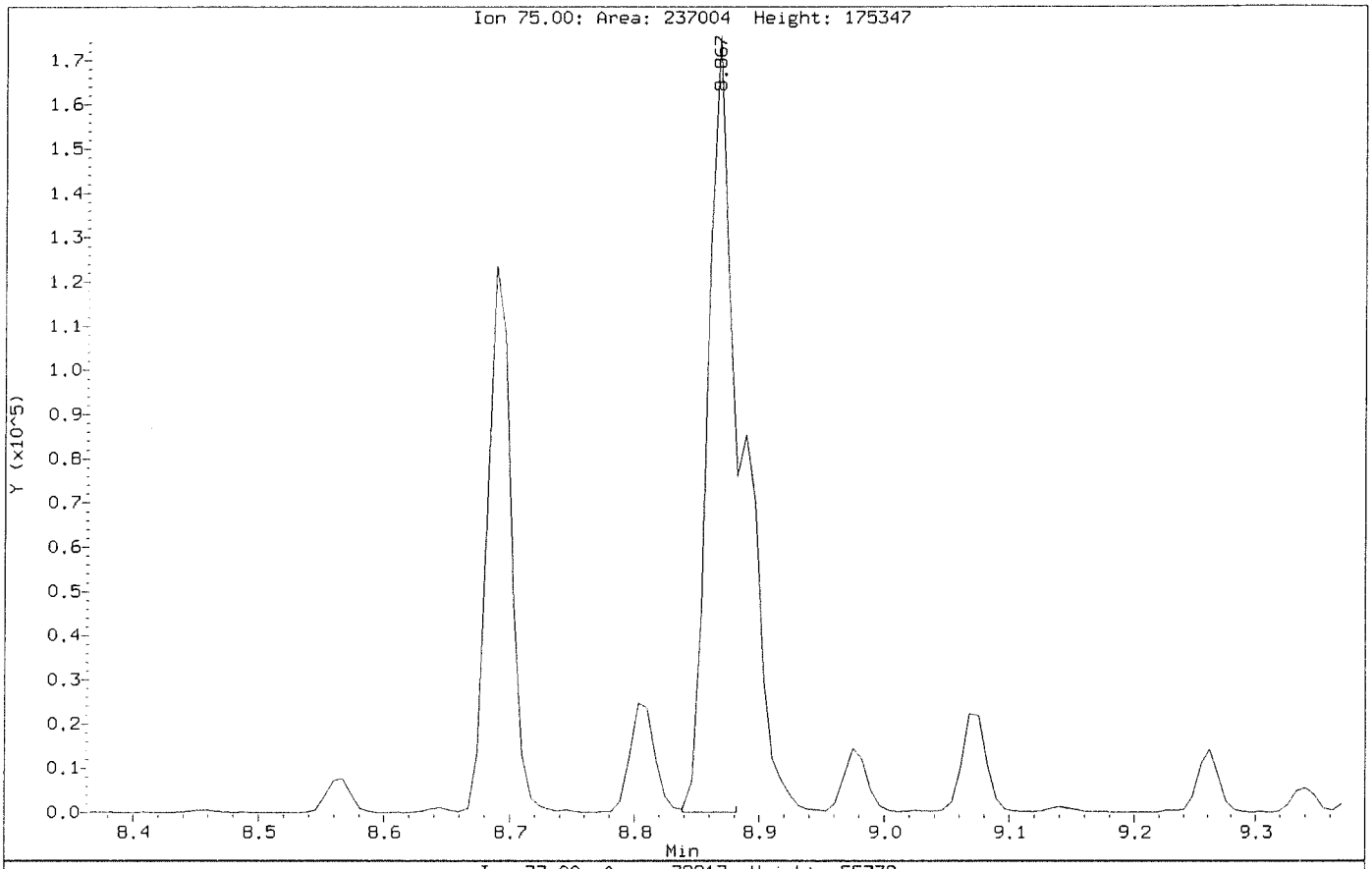
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

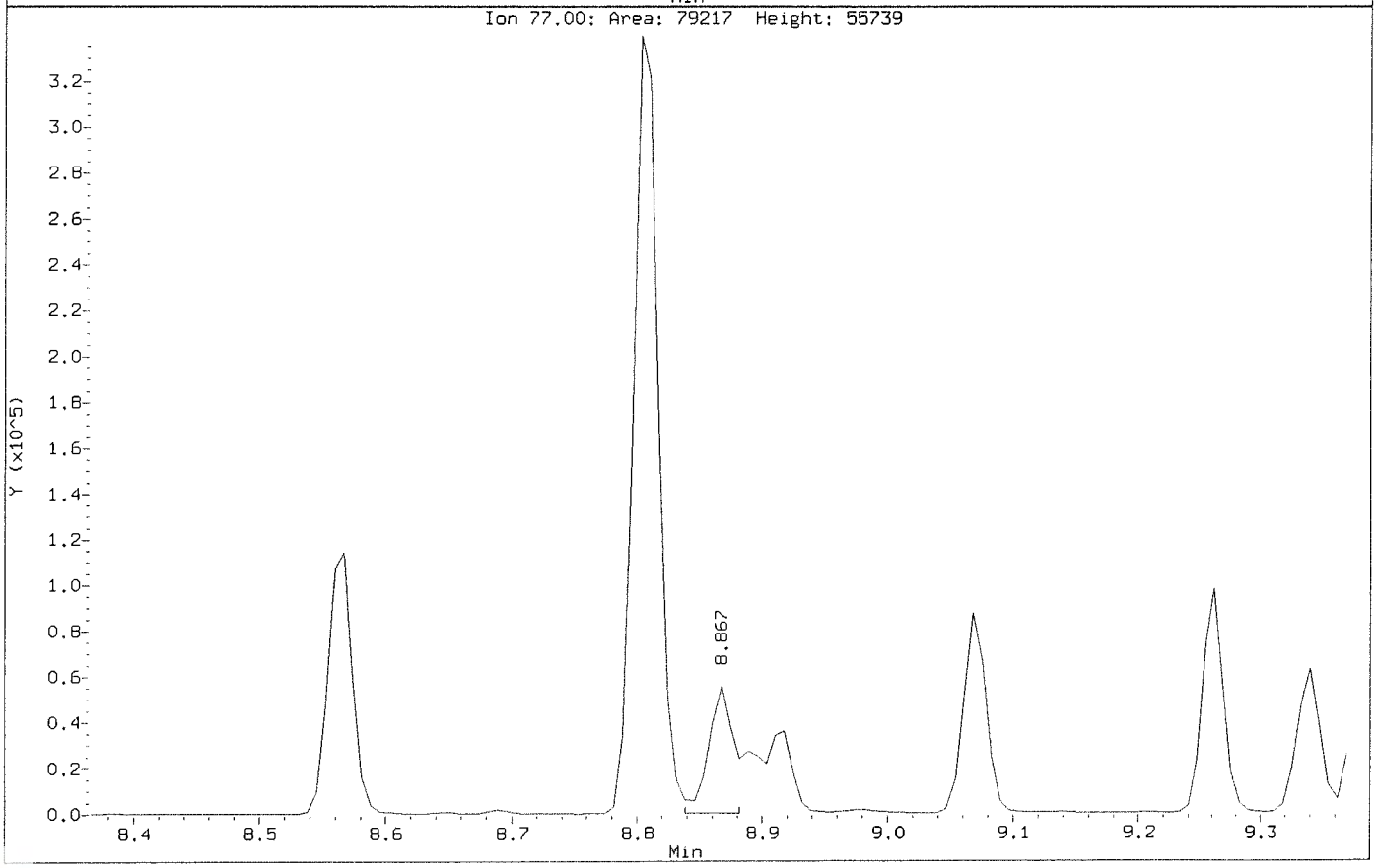




Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092414.D
Injection Date: 24-SEP-2020 16:45
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





MSVOA06 -Logbook

Batch: 42004 **Analyst:** Presenta Cabascango

Date: 10-08-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	10-08-2020 10:58 am	1.00	50 mL	50 mL	X010801.D	Liquid	Y	NA
	Auto find/ purged									
2	CCV	CCV	10-08-2020 11:22 am	1.00	50 mL	50 mL	X010802.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	BLANK	SAMP	10-08-2020 11:46 am	1.00	50 mL	50 mL	X010803.D	Liquid	Y	NA
4	CCB	SAMP	10-08-2020 12:10 pm	1.00	50 mL	50 mL	X010804.D	Liquid	Y	NA
5	VLCSW-200108	LCS	10-08-2020 12:34 pm	1.00	50 mL	50 mL	X010805.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLK	SAMP	10-08-2020 12:58 pm	1.00	50 mL	50 mL	X010806.D	Liquid	Y	NA
7	VBLKW-200108	MBLK	10-08-2020 01:22 pm	1.00	50 mL	50 mL	X010807.D	Liquid	Y	NA
8	HS20100298-08	SAMP	10-08-2020 01:46 pm	1.00	50 mL	50 mL	X010808.D	Liquid	Y	<2
9	HS20100298-09	SAMP	10-08-2020 02:10 pm	1.00	50 mL	50 mL	X010809.D	Liquid	Y	<2
10	HS20100298-10	SAMP	10-08-2020 02:34 pm	1.00	50 mL	50 mL	X010810.D	Liquid	Y	<2
11	HS20100283-01	SAMP	10-08-2020 02:58 pm	1.00	50 mL	50 mL	X010811.D	Liquid	Y	NA
	neat samples									
12	HS20100283-02	SAMP	10-08-2020 03:22 pm	1.00	50 mL	50 mL	X010812.D	Liquid	Y	NA
13	HS20100283-03	SAMP	10-08-2020 03:47 pm	1.00	50 mL	50 mL	X010813.D	Liquid	Y	NA
14	HS20100283-04	SAMP	10-08-2020 04:11 pm	1.00	50 mL	50 mL	X010814.D	Liquid	Y	NA
15	HS20100279-02	SAMP	10-08-2020 04:35 pm	1.00	50 mL	50 mL	X010815.D	Liquid	Y	NA
	neat samples									
16	HS20100279-03	SAMP	10-08-2020 04:59 pm	1.00	50 mL	50 mL	X010816.D	Liquid	Y	NA
17	HS20100279-04	SAMP	10-08-2020 05:23 pm	1.00	50 mL	50 mL	X010817.D	Liquid	Y	NA
18	HS20100103-02	SAMP	10-08-2020 05:47 pm	1.00	50 mL	50 mL	X010818.D	Liquid	Y	<2
19	HS20100283-03MS	MS	10-08-2020 06:11 pm	1.00	50 mL	50 mL	X010819.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
20	HS20100283-03MSD	MSD	10-08-2020 06:35 pm	1.00	50 mL	50 mL	X010820.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
21	HS20100103-02	SAMP	10-08-2020 06:59 pm	10.00	5 mL	50 mL	X010821.D	Liquid	Y	<2
22	HS20100227-03	SAMP	10-08-2020 07:23 pm	1.00	50 mL	50 mL	X010822.D	Liquid	Y	<2
23	HS20100334-02	SAMP	10-08-2020 07:47 pm	1.00	50 mL	50 mL	X010823.D	Liquid	Y	<2
24	HS20100334-01	SAMP	10-08-2020 08:11 pm	1.00	50 mL	50 mL	X010824.D	Liquid	Y	<2
25	HS20100103-03	SAMP	10-08-2020 08:35 pm	1.00	50 mL	50 mL	X010825.D	Liquid	Y	<2
26	HS20100103-01	SAMP	10-08-2020 08:59 pm	1.00	50 mL	50 mL	X010826.D	Liquid	Y	<2
27	HS20100361-03	SAMP	10-08-2020 09:23 pm	1.00	50 mL	50 mL	X010827.D	Liquid	Y	<2
28	HS20100361-01	SAMP	10-08-2020 09:47 pm	1.00	50 mL	50 mL	X010828.D	Liquid	Y	<2
29	HS20100361-02	SAMP	10-08-2020 10:11 pm	1.00	50 mL	50 mL	X010829.D	Liquid	Y	<2
30	CCV	CCV	10-08-2020 10:35 pm	1.00	50 mL	50 mL	X010830.D	Liquid	Y	NA

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-47-06
IS ID	31106-47-06
CAL STD ID	31106-50-01/02
BFB ID	31106-47-06
pH Paper	634-64-10

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-200108	97	95	96	102	0
02	VBLKW-200108	91	94	98	107	0
03	HS20100283-03	92	96	96	106	0
04	HS20100283-04	93	96	96	106	0
05	HS20100334-02	93	95	100	105	0
06	HS20100334-01	92	94	98	108	0
07						
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200108

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Lab File ID: X010807 Lab Sample ID: VBLKW-200108

Date Analyzed: 10/08/20 Time Analyzed: 1322

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-200108	VLCSW-200108	X010805	1234
02	HS20100283-0	HS20100283-03M	X010819	1811
03	HS20100283-0	HS20100283-03M	X010820	1835
04	HS20100334-0	HS20100334-02	X010823	1947
05	HS20100334-0	HS20100334-01	X010824	2011
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Lab File ID: X010801 BFB Injection Date: 10/08/20

Instrument ID: VOA6 BFB Injection Time: 1058

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.3
75	30.0 - 60.0% of mass 95	50.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.5 (0.7)1
174	Greater than 50.0% of mass 95	64.8
175	5.0 - 9.0% of mass 174	5.6 (8.7)1
176	95.0 - 101.0% of mass 174	64.5 (99.4)1
177	5.0 - 9.0% of mass 176	4.9 (7.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X010802	10/08/20	1122
02	VLCSW-200108	VLCSW-200108	X010805	10/08/20	1234
03	VBLKW-200108	VBLKW-200108	X010807	10/08/20	1322
04	HS20100283-0	HS20100283-03M	X010819	10/08/20	1811
05	HS20100283-0	HS20100283-03M	X010820	10/08/20	1835
06	HS20100334-0	HS20100334-02	X010823	10/08/20	1947
07	HS20100334-0	HS20100334-01	X010824	10/08/20	2011
08	CCV	CCV	X010830	10/08/20	2235
09					
10					
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22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Instrument ID: VOA6 Calibration Date: 10/08/20 Time: 1122

Lab File ID: X010802 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
cis-1,3-Dichloropropene	0.5740000	0.5607936	0.5607936	0.2	2.30	20.00	AVRG	
trans-1,3-Dichloropropene	0.4780000	0.4698933	0.4698933	0.1	1.70	20.00	AVRG	
1,3-Dichlorobenzene	1.6080000	1.5812196	1.5812196	0.6	1.66	20.00	AVRG	
2,2-Dichloropropane	0.7850000	0.7758598	0.7758598	0.1	1.16	20.00	AVRG	
1,1-Dichloropropene	0.4600000	0.4472903	0.4472903	0.1	2.76	20.00	AVRG	
Dibromomethane	0.2200000	0.2079893	0.2079893	0.1	5.46	20.00	AVRG	
1,2-Dibromoethane	0.3470000	0.3277178	0.3277178	0.1	5.56	20.00	AVRG	
trans-1,2-Dichloroethene	0.5180000	0.4976833	0.4976833	0.1	3.92	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3460000	0.3394117	0.3394117	0.1	1.90	20.00	AVRG	
1,1,1-Trichloroethane	0.7700000	0.7422314	0.7422314	0.1	3.61	20.00	AVRG	
1,1,2,2-Tetrachloroethane	0.8840000	0.8304595	0.8304595	0.3	6.06	20.00	AVRG	
1,1,2-Trichloroethane	0.2940000	0.2760019	0.2760019	0.1	6.12	20.00	AVRG	
1,1-Dichloroethane	1.0450000	0.9875136	0.9875136	0.2	5.50	20.00	AVRG	
1,1-Dichloroethene	0.4490000	0.4436646	0.4436646	0.1	1.19	20.00	AVRG	
Trichloroethene	0.3580000	0.3446857	0.3446857	0.2	3.72	20.00	AVRG	
1,2,3-Trichlorobenzene	0.1930000	0.1767531	0.1767531	0.01	8.42	20.00	AVRG	
Trichlorofluoromethane	0.7270000	0.7278024	0.7278024	0.1	-0.11	20.00	AVRG	
1,2,4-Trichlorobenzene	46.461083	50.000000	0.3510111	0.1	7.08	20.00	LINR	
1,2,4-Trimethylbenzene	2.9760000	2.9906734	2.9906734	0.1	-0.49	20.00	AVRG	
Tetrachloroethene	0.3160000	0.3051353	0.3051353	0.2	3.44	20.00	AVRG	
1,2-Dichlorobenzene	1.3920000	1.3391689	1.3391689	0.4	3.80	20.00	AVRG	
1,2-Dichloroethane	0.4310000	0.4050487	0.4050487	0.1	6.02	20.00	AVRG	
1,2-Dichloropropane	0.3700000	0.3591913	0.3591913	0.1	2.92	20.00	AVRG	
1,3,5-Trimethylbenzene	2.9520000	2.9842055	2.9842055	0.1	-1.09	20.00	AVRG	
1,3-Dichloropropane	0.6090000	0.5698734	0.5698734	0.1	6.42	20.00	AVRG	
1,4-Dichlorobenzene	1.5970000	1.5506071	1.5506071	0.4	2.90	20.00	AVRG	
Toluene	1.6180000	1.5357681	1.5357681	0.4	5.08	20.00	AVRG	
2-Butanone	0.1820000	0.2029710	0.2029710	0.1	-11.52	20.00	AVRG	
2-Chlorotoluene	2.5980000	2.5316842	2.5316842	0.1	2.55	20.00	AVRG	
2-Hexanone	0.2220000	0.2206383	0.2206383	0.1	0.61	20.00	AVRG	
4-Chlorotoluene	2.9580000	2.9032806	2.9032806	0.1	1.85	20.00	AVRG	
tert-Butylbenzene	2.4610000	2.4445933	2.4445933	0.1	0.67	20.00	AVRG	
4-Methyl-2-Pentanone	0.3510000	0.3346647	0.3346647	0.1	4.65	20.00	AVRG	
Acetone	121.49431	100.00000	0.1437480	0.1	-21.49	20.00	LINR	<-
Benzene	1.4300000	1.3764805	1.3764805	0.5	3.74	20.00	AVRG	
Bromobenzene	1.0100000	0.9819714	0.9819714	0.1	2.78	20.00	AVRG	
Bromochloromethane	0.3120000	0.2813995	0.2813995	0.1	9.81	20.00	AVRG	
Bromodichloromethane	0.4540000	0.4365266	0.4365266	0.2	3.85	20.00	AVRG	
Bromoform	0.2180000	0.2157221	0.2157221	0.1	1.04	20.00	AVRG	
Bromomethane	50.569326	50.000000	0.4073120	0.1	-1.14	20.00	LINR	
Carbon Disulfide	1.5530000	1.5002029	1.5002029	0.1	3.40	20.00	AVRG	
Carbon Tetrachloride	0.4000000	0.3880876	0.3880876	0.1	2.98	20.00	AVRG	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010033

Instrument ID: VOA6 Calibration Date: 10/08/20 Time: 1122

Lab File ID: X010802 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	1.0170000	0.9682963	0.9682963	0.5	4.79	20.00	AVRG
Chloroethane	0.3920000	0.3744669	0.3744669	0.1	4.47	20.00	AVRG
Chloroform	0.9690000	0.9180103	0.9180103	0.2	5.26	20.00	AVRG
Chloromethane	0.6850000	0.6276478	0.6276478	0.1	8.37	20.00	AVRG
cis-1,2-Dichloroethene	0.6120000	0.5870376	0.5870376	0.1	4.08	20.00	AVRG
Dibromochloromethane	0.3570000	0.3407341	0.3407341	0.1	4.56	20.00	AVRG
Dichlorodifluoromethane	40.319274	50.000000	0.4073893	0.1	19.36	20.00	LINR
Ethylbenzene	0.5310000	0.5133164	0.5133164	0.1	3.33	20.00	AVRG
Hexachlorobutadiene	50.412108	50.000000	0.3532921	0.1	-0.82	20.00	2RDR
Isopropylbenzene	1.5440000	1.5283665	1.5283665	0.1	1.01	20.00	AVRG
m,p-Xylenes	0.6370000	0.6244016	0.6244016	0.1	1.98	20.00	AVRG
Methylene Chloride	50.961845	50.000000	0.5576071	0.1	-1.92	20.00	LINR
n-Butylbenzene	2.5760000	2.6949122	2.6949122	0.5	-4.62	20.00	AVRG
n-Propylbenzene	4.2650000	4.3392745	4.3392745	0.1	-1.74	20.00	AVRG
Naphthalene	0.4660000	0.4526005	0.4526005	0.2	2.88	20.00	AVRG
o-Xylene	0.6220000	0.6028066	0.6028066	0.3	3.08	20.00	AVRG
sec-Butylbenzene	3.4930000	3.5310480	3.5310480	0.1	-1.09	20.00	AVRG
Styrene	1.0650000	1.0550879	1.0550879	0.3	0.93	20.00	AVRG
Vinyl Chloride	0.6460000	0.6299118	0.6299118	0.1	2.49	20.00	AVRG
1,2,3-Trichloropropane	0.7310000	0.7196755	0.7196755	0.1	1.55	20.00	AVRG
p-Isopropyltoluene	2.9780000	3.0263055	3.0263055	0.1	-1.62	20.00	AVRG
1,2-Dibromo-3-Chloropropane	6.e-002	5.33e-002	5.33e-002	0.05	11.17	20.00	AVRG
1,2-Dichloroethane-d4	0.5620000	0.5269382	0.5269382	0.1	6.24	20.00	AVRG
Dibromofluoromethane	0.5140000	0.4823936	0.4823936	0.1	6.15	20.00	AVRG
Toluene-d8	1.3140000	1.2425846	1.2425846	0.1	5.43	20.00	AVRG
4-Bromofluorobenzene	51.169852	50.000000	0.4458024	0.1	-2.34	20.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Instrument ID: VOA6 Calibration Date: 10/08/20 Time: 2235

Lab File ID: X010830 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.5740000	0.5561220	0.5561220	0.2	3.11	50.00	AVRG
trans-1,3-Dichloropropene	0.4780000	0.4687487	0.4687487	0.1	1.94	50.00	AVRG
1,3-Dichlorobenzene	1.6080000	1.5459321	1.5459321	0.6	3.86	50.00	AVRG
2,2-Dichloropropane	0.7850000	0.6874085	0.6874085	0.1	12.43	50.00	AVRG
1,1-Dichloropropene	0.4600000	0.4513426	0.4513426	0.1	1.88	50.00	AVRG
Dibromomethane	0.2200000	0.2151316	0.2151316	0.1	2.21	50.00	AVRG
1,2-Dibromoethane	0.3470000	0.3412250	0.3412250	0.1	1.66	50.00	AVRG
trans-1,2-Dichloroethene	0.5180000	0.5293862	0.5293862	0.1	-2.20	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3460000	0.3459597	0.3459597	0.1	0.01	50.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.8012887	0.8012887	0.1	-4.06	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.8840000	0.8656917	0.8656917	0.3	2.07	50.00	AVRG
1,1,2-Trichloroethane	0.2940000	0.2893883	0.2893883	0.1	1.57	50.00	AVRG
1,1-Dichloroethane	1.0450000	1.0589193	1.0589193	0.2	-1.33	50.00	AVRG
1,1-Dichloroethene	0.4490000	0.4889580	0.4889580	0.1	-8.90	50.00	AVRG
Trichloroethene	0.3580000	0.3522586	0.3522586	0.2	1.60	50.00	AVRG
1,2,3-Trichlorobenzene	0.1930000	0.1702459	0.1702459	0.01	11.79	50.00	AVRG
Trichlorofluoromethane	0.7270000	0.8059634	0.8059634	0.1	-10.86	50.00	AVRG
1,2,4-Trichlorobenzene	45.542736	50.000000	0.3438618	0.1	8.91	50.00	LINR
1,2,4-Trimethylbenzene	2.9760000	2.9188139	2.9188139	0.1	1.92	50.00	AVRG
Tetrachloroethene	0.3160000	0.3041218	0.3041218	0.2	3.76	50.00	AVRG
1,2-Dichlorobenzene	1.3920000	1.3265022	1.3265022	0.4	4.70	50.00	AVRG
1,2-Dichloroethane	0.4310000	0.4215000	0.4215000	0.1	2.20	50.00	AVRG
1,2-Dichloropropane	0.3700000	0.3705207	0.3705207	0.1	-0.14	50.00	AVRG
1,3,5-Trimethylbenzene	2.9520000	2.9141526	2.9141526	0.1	1.28	50.00	AVRG
1,3-Dichloropropane	0.6090000	0.5929047	0.5929047	0.1	2.64	50.00	AVRG
1,4-Dichlorobenzene	1.5970000	1.5240716	1.5240716	0.4	4.57	50.00	AVRG
Toluene	1.6180000	1.5629282	1.5629282	0.4	3.40	50.00	AVRG
2-Butanone	0.1820000	0.2171005	0.2171005	0.1	-19.28	50.00	AVRG
2-Chlorotoluene	2.5980000	2.4891718	2.4891718	0.1	4.19	50.00	AVRG
2-Hexanone	0.2220000	0.2310751	0.2310751	0.1	-4.09	50.00	AVRG
4-Chlorotoluene	2.9580000	2.8269934	2.8269934	0.1	4.43	50.00	AVRG
tert-Butylbenzene	2.4610000	2.3984357	2.3984357	0.1	2.54	50.00	AVRG
4-Methyl-2-Pentanone	0.3510000	0.3539859	0.3539859	0.1	-0.85	50.00	AVRG
Acetone	123.57311	100.00000	0.1461088	0.1	-23.57	50.00	LINR
Benzene	1.4300000	1.4127245	1.4127245	0.5	1.21	50.00	AVRG
Bromobenzene	1.0100000	0.9938433	0.9938433	0.1	1.60	50.00	AVRG
Bromochloromethane	0.3120000	0.3104608	0.3104608	0.1	0.49	50.00	AVRG
Bromodichloromethane	0.4540000	0.4506944	0.4506944	0.2	0.73	50.00	AVRG
Bromoform	0.2180000	0.2238987	0.2238987	0.1	-2.70	50.00	AVRG
Bromomethane	55.961039	50.000000	0.4505357	0.1	-11.92	50.00	LINR
Carbon Disulfide	1.5530000	1.5797257	1.5797257	0.1	-1.72	50.00	AVRG
Carbon Tetrachloride	0.4000000	0.3984053	0.3984053	0.1	0.40	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010033

Instrument ID: VOA6 Calibration Date: 10/08/20 Time: 2235

Lab File ID: X010830 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	1.0170000	0.9787612	0.9787612	0.5	3.76	50.00	AVRG
Chloroethane	0.3920000	0.4111858	0.4111858	0.1	-4.89	50.00	AVRG
Chloroform	0.9690000	0.9906709	0.9906709	0.2	-2.24	50.00	AVRG
Chloromethane	0.6850000	0.6862678	0.6862678	0.1	-0.18	50.00	AVRG
cis-1,2-Dichloroethene	0.6120000	0.6294279	0.6294279	0.1	-2.85	50.00	AVRG
Dibromochloromethane	0.3570000	0.3522637	0.3522637	0.1	1.33	50.00	AVRG
Dichlorodifluoromethane	44.211314	50.000000	0.4488458	0.1	11.58	50.00	LINR
Ethylbenzene	0.5310000	0.5211431	0.5211431	0.1	1.86	50.00	AVRG
Hexachlorobutadiene	47.136620	50.000000	0.3296127	0.1	5.73	50.00	2RDR
Isopropylbenzene	1.5440000	1.5263125	1.5263125	0.1	1.14	50.00	AVRG
m,p-Xylenes	0.6370000	0.6213955	0.6213955	0.1	2.45	50.00	AVRG
Methylene Chloride	55.216919	50.000000	0.6035270	0.1	-10.43	50.00	LINR
n-Butylbenzene	2.5760000	2.5006603	2.5006603	0.5	2.92	50.00	AVRG
n-Propylbenzene	4.2650000	4.1980562	4.1980562	0.1	1.57	50.00	AVRG
Naphthalene	0.4660000	0.4272255	0.4272255	0.2	8.32	50.00	AVRG
o-Xylene	0.6220000	0.6124810	0.6124810	0.3	1.53	50.00	AVRG
sec-Butylbenzene	3.4930000	3.4231705	3.4231705	0.1	2.00	50.00	AVRG
Styrene	1.0650000	1.0478755	1.0478755	0.3	1.61	50.00	AVRG
Vinyl Chloride	0.6460000	0.6969397	0.6969397	0.1	-7.88	50.00	AVRG
1,2,3-Trichloropropane	0.7310000	0.7559315	0.7559315	0.1	-3.41	50.00	AVRG
p-Isopropyltoluene	2.9780000	2.8906451	2.8906451	0.1	2.93	50.00	AVRG
1,2-Dibromo-3-Chloropropane	6.e-002	5.71e-002	5.71e-002	0.05	4.83	50.00	AVRG
1,2-Dichloroethane-d4	0.5620000	0.5815405	0.5815405	0.1	-3.48	50.00	AVRG
Dibromofluoromethane	0.5140000	0.5193223	0.5193223	0.1	-1.04	50.00	AVRG
Toluene-d8	1.3140000	1.2671058	1.2671058	0.1	3.57	50.00	AVRG
4-Bromofluorobenzene	52.107894	50.000000	0.4538448	0.1	-4.22	50.00	LINR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Lab File ID (Standard): X010802 Date Analyzed: 10/08/20

Instrument ID: VOA6 Time Analyzed: 1122

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	818201	7.67	896344	4.97	341069	9.66
	UPPER LIMIT	1636402	8.17	1792688	5.47	682138	10.16
	LOWER LIMIT	409101	7.17	448172	4.47	170535	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-200108	854848	7.67	943112	4.97	367292	9.66
02	VBLKW-200108	811972	7.67	900112	4.97	350345	9.66
03	HS20100283-03	769048	7.67	836047	4.97	331098	9.66
04	HS20100283-04	759166	7.67	818524	4.97	329455	9.66
05	HS20100334-02	782763	7.67	884600	4.97	326803	9.67
06	HS20100334-01	820948	7.67	911744	4.97	352529	9.67
07							
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IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100334

Lab File ID (Standard): X010802 Date Analyzed: 10/08/20

Instrument ID: VOA6 Time Analyzed: 1122

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	569340	4.19				
	UPPER LIMIT	1138680	4.69				
	LOWER LIMIT	284670	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-200108	600056	4.19				
02	VBLKW-200108	567881	4.19				
03	HS20100283-03	522336	4.19				
04	HS20100283-04	512828	4.19				
05	HS20100334-02	551965	4.19				
06	HS20100334-01	570674	4.19				
07							
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20							

IS4 = Pentafluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010801.D

Date : 08-OCT-2020 10:58

Client ID: BFB

Instrument: voa6.i

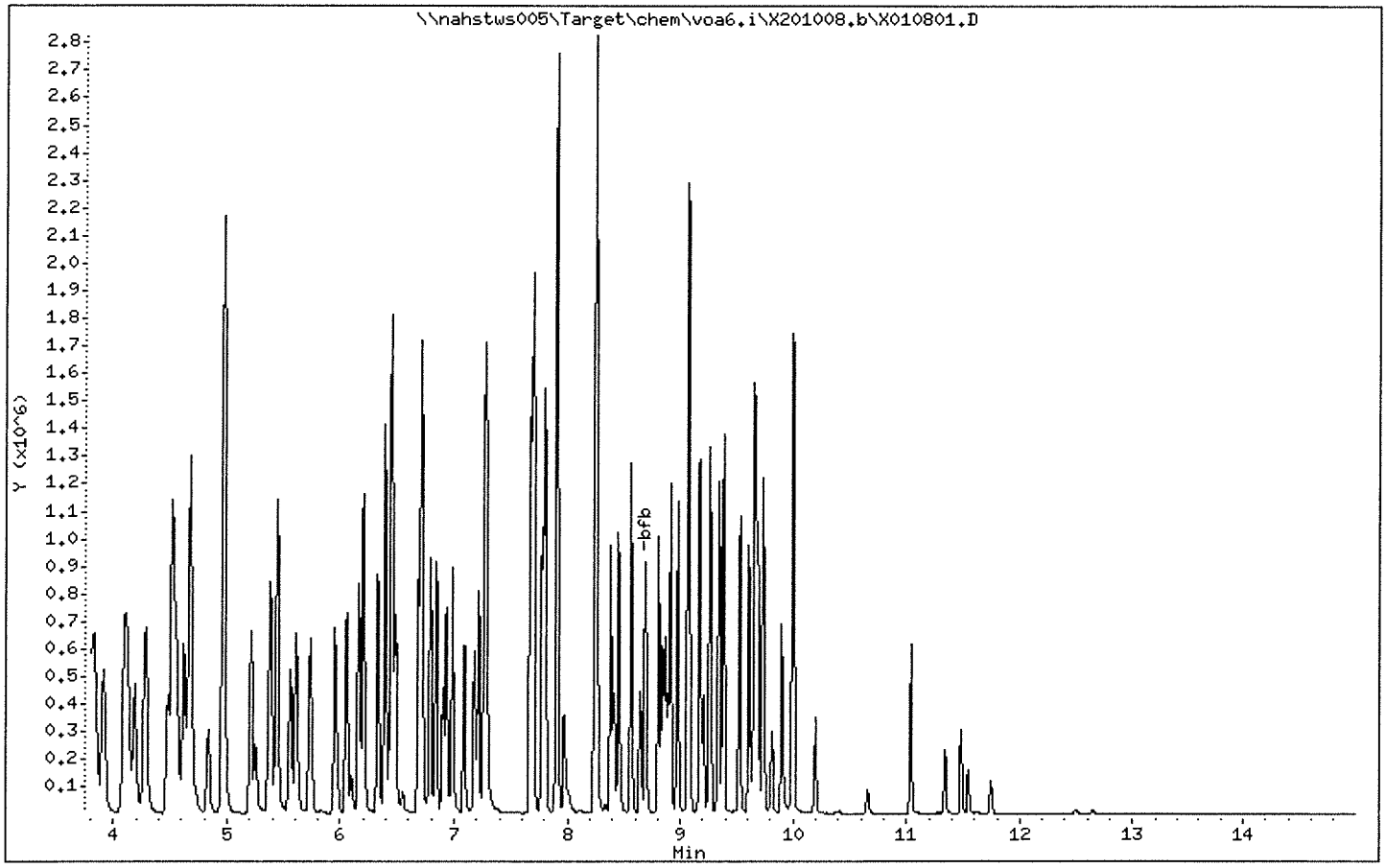
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010801.D

Date : 08-OCT-2020 10:58

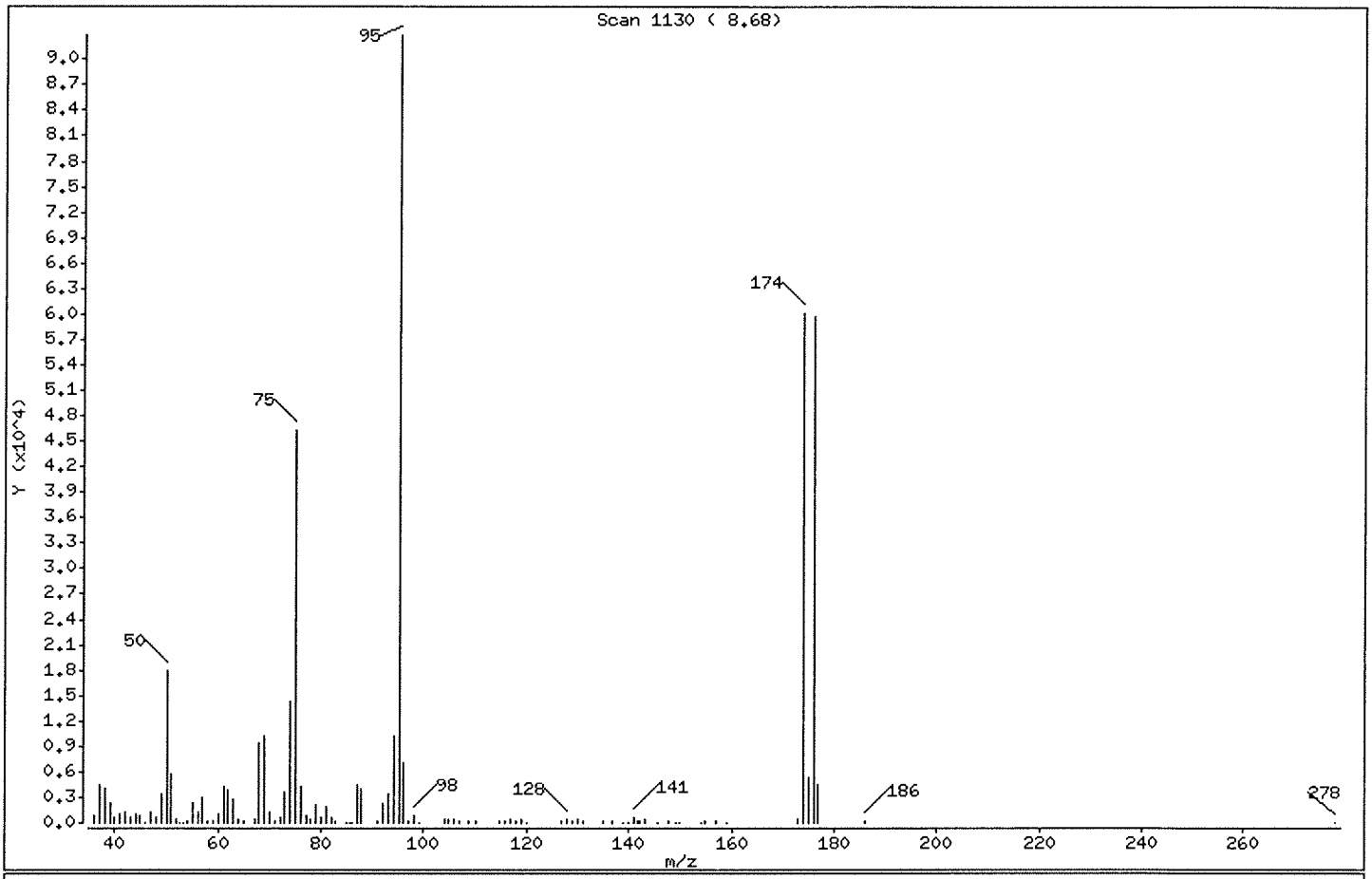
Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.33
75	30.00 - 60.00% of mass 95	49.97
96	5.00 - 9.00% of mass 95	7.63
173	Less than 2.00% of mass 174	0.47 (0.72)
174	Greater than 50.00% of mass 95	64.84
175	5.00 - 9.00% of mass 174	5.64 (8.70)
176	95.00 - 101.00% of mass 174	64.45 (99.40)
177	5.00 - 9.00% of mass 176	4.89 (7.59)

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010801.D

Date : 08-OCT-2020 10:58

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X010801.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.10
Number of points: 102

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	949	61.10	4221	88.00	3949	131.00	120
37.10	4581	62.10	3908	91.00	289	135.00	117
38.10	4027	63.10	2671	92.00	2306	136.80	137
39.10	2273	64.10	396	93.10	3429	138.90	62
40.00	676	65.10	132	94.10	10308	139.90	69
41.20	1030	67.10	421	95.10	92832	140.90	613
42.10	1325	68.10	9287	96.10	7086	141.80	119
43.10	707	69.10	10147	97.00	278	142.20	134
44.10	1025	70.10	1375	98.10	862	143.00	515
45.10	926	71.10	149	99.20	100	145.80	68
46.00	50	72.10	550	104.00	402	147.90	180
47.10	1376	73.10	3584	105.00	392	149.10	67
48.10	589	74.10	14306	106.00	330	149.80	99
49.10	3415	75.10	46384	107.10	304	154.10	106
50.10	17944	76.10	4165	108.90	258	154.90	252
51.10	5743	77.10	772	110.10	121	157.00	154
52.10	326	78.00	435	114.80	112	159.00	83
52.90	77	79.00	2114	116.00	308	173.00	436
53.30	72	80.00	652	116.90	425	174.00	60192
54.10	193	81.00	1910	118.10	300	175.00	5234
55.10	2350	82.00	556	118.90	348	176.00	59832
56.10	1327	83.00	221	120.10	56	177.00	4541
57.10	2921	85.00	58	126.90	200	186.10	195
58.00	277	85.70	61	128.00	508	278.30	60
59.10	217	86.10	85	129.00	179		
60.10	981	87.10	4394	130.00	322		

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010802.D Page 1
Report Date: 07-Nov-2020 10:39

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201008.b\X010802.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 08-OCT-2020 11:22
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201008.b\8260W.m
Meth Date : 07-Nov-2020 10:39 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

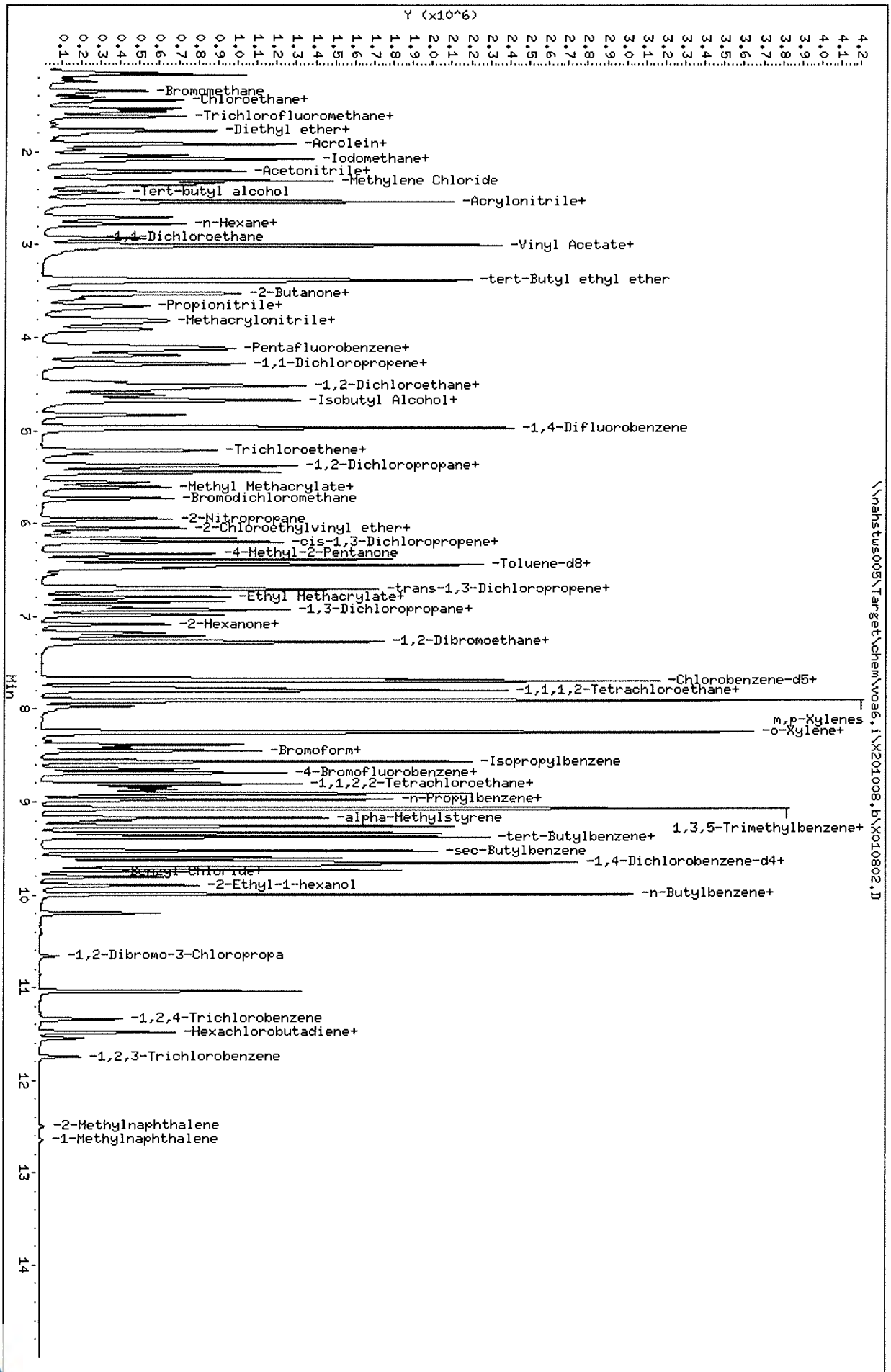
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	569340	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	896344	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	818201	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	341069	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	274646	50.0000	46.94
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	300007	50.0000	46.87
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1016684	50.0000	47.26
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	364756	50.0000	51.16
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	277707	50.0000	48.97
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	422582	50.0000	48.19
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	283244	50.0000	46.96
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	225825	50.0000	46.86
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	562231	50.0000	47.27
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	252596	50.0000	49.34
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	400926	50.0000	48.62
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	60285	50.0000	45.73
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	245459	50.0000	49.19(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	119719	50.0000	46.46
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	1020026	50.0000	50.24
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	18179	50.0000	44.16
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	268139	50.0000	47.16
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	456749	50.0000	48.09

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	363063	50.0000	46.97
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	321959	50.0000	48.50
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1017820	50.0000	50.53
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	539305	50.0000	49.16
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	466271	50.0000	46.77
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	528864	50.0000	48.54
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	441728	50.0000	49.42
24	2-Butanone	43	3.580	3.580	(0.855)	231119	100.000	111.20
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	863479	50.0000	48.72
52	2-Hexanone	43	7.090	7.090	(0.924)	361053	100.000	99.51
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	990219	50.0000	49.07
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1032179	50.0000	50.81
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	547646	100.000	95.35
10	Acetone	43	1.976	1.976	(0.472)	163683	100.000	121.49
37	Benzene	78	4.519	4.519	(0.909)	1233800	50.0000	48.12
74	Bromobenzene	156	8.810	8.810	(0.912)	334920	50.0000	48.59
29	Bromochloromethane	128	3.803	3.803	(0.908)	160212	50.0000	45.02
39	Bromodichloromethane	83	5.729	5.729	(1.153)	391278	50.0000	48.13
66	Bromoform	173	8.416	8.416	(1.097)	176504	50.0000	49.38
6	Bromomethane	94	1.346	1.346	(0.321)	231899	50.0000	50.56
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1708251	100.000	96.60
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	347860	50.0000	48.51
59	Chlorobenzene	112	7.699	7.699	(1.004)	792261	50.0000	47.59
7	Chloroethane	64	1.410	1.410	(0.337)	213199	50.0000	47.80
28	Chloroform	83	3.910	3.910	(0.933)	522660	50.0000	47.35
3	Chloromethane	50	1.081	1.081	(0.258)	357345	50.0000	45.83
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	334224	50.0000	47.91
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	502664	50.0000	48.88
55	Dibromochloromethane	129	7.176	7.176	(0.936)	278789	50.0000	47.68
44	Dibromomethane	93	5.557	5.557	(1.118)	186430	50.0000	47.36
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	231943	50.0000	40.31
61	Ethylbenzene	106	7.800	7.800	(1.017)	419996	50.0000	48.33
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	120497	50.0000	50.41
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1250511	50.0000	49.49
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1021772	100.000	97.94
17	Methylene Chloride	84	2.305	2.305	(0.550)	317468	50.0000	50.96
87	n-Butylbenzene	91	9.999	9.999	(1.035)	919151	50.0000	52.29
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1479992	50.0000	50.87
92	Naphthalene	128	11.546	11.546	(1.195)	154368	50.0000	48.53
63	o-Xylene	106	8.244	8.244	(1.075)	493217	50.0000	48.41
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	1204331	50.0000	50.53
64	Styrene	104	8.258	8.258	(1.077)	863274	50.0000	49.53
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	833775	50.0000	49.66
56	Tetrachloroethene	164	6.933	6.933	(0.904)	249662	50.0000	48.29
50	Toluene	91	6.446	6.446	(0.840)	1256567	50.0000	47.44
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	283351	50.0000	48.04
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	421186	50.0000	49.14
38	Trichloroethene	130	5.214	5.214	(1.049)	308957	50.0000	48.19
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	414367	50.0000	50.06
5	Vinyl Chloride	62	1.145	1.145	(0.273)	358634	50.0000	48.76

QC Flag Legend

M - Compound response manually integrated.



Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010802.D
Date : 08-OCT-2020 11:22
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\Before\X010802.D
Injection Date: 08-OCT-2020 11:22
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

