LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

CHRONOLOGICAL INDEX

Volume 25 of 25

2007

Bate Stamp Numbers

00063123 - 00063389

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976 – 2007

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

VOLUME 25 of 25

2007

A. Title: Report (continued) - Final Site Investigation Report LHAAP-06, LHAAP-07, LHAAP-51, LHAAP-55, LHAAP-64, LHAAP-66, and LHAAP-68, Revision 1, Attachment 1
Author(s): Shaw
Recipient: All Stakeholders
Date: December 11, 2007
Bate Stamp: 00063123 - 00063364

B. Title: Minutes - Longhorn Army Ammunition Plant Restoration Advisory Board Meeting
Author(s): Shaw
Recipient: All Stakeholders
Date: December 11, 2007
Bate Stamp: 00063365 - 00063374

C. Title: Minutes – Monthly Managers Meeting
Author(s): Shaw
Recipient: All Stakeholders
Date: December 11, 2007
Bate Stamp: 00063375 - 00063389

156 Starlite Drive, Marietta, OH 45750 • TEL 740-373-4071 • FAX 740-373-4835 • http://www.kemron.com

Laboratory Report Number: L0705163

Please find enclosed the analytical results for the samples you submitted to KEMRON Environmental Services.

Review and compilation of your report was completed by KEMRON's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box bleow at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

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This report was reviewed on May 18, 2007.

Stephanie Mossburg

STEPHANIE MOSSBURG - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the NELAP standards and other applicable contract terms and conditions. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of KEMRON Environmental Services.

This report was certified on May 18, 2007.

David E. Vandenberg

David Vandenberg - Vice President

FL DOH NELAP ID: E8755
This report contains a total of 242 pages.

Protecting Our Environmental Future

KEMRON REPORT L0705163
PREPARED FOR Shaw E I, Inc.
WORK ID: LONGHORN AAP KARNACK TX

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1.0 Introduction

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

KEMRON Login No.: L0705163

CHAIN OF CUSTODY: The chain of custody number was 10440.

SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 2 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

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

Approved: 08-MAY-07
Stephanie Mossburg

Laboratory Data Package Cover Page

00063127

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each enviornmental sample that includes:

a) Items consistant with NELAC 5.13 or ISO/IEC 17025 Section 5.10

b) dilution factors,

c) preparation methods,

d) Cleanup methods, and

e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

a) Calculated recovery (%R) for each analyte, and

b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;

R6 Test reports/summary forms FOR laboratory control samples (LCSs) including:

a) LCS spiking amount,

b) Calculated %R for each analyte, and

c) The laboratory"s LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a) Samples associated with the MS/MSD clearly identified,

b) MS/MSD spiking amounts,

c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d) Calculated %R and relative percent differences (RPDs), and

e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) revocery and precision:

a) the amount of analyte measured in the duplicate,

b) the calculated RPD, and

c) the laboratory's QC limits for anlytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratoy in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: [] This laboratory is an in-house laboratory controlled by the person repsonding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is trus.

MICHAEL D. COCHRAN		Semivolatiles Lab Supervisor	May 16, 2007
Name (Printed)	Signature	Official Title (printed)	DATE

RG-366/TRRP-13 December 2002 A1

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	8270
Prep Batch Number(s):	WG240111
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	May 16, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?			✓		
Were % moisture (or solids) reported for all soil and sediment samples?			✓		
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?	✓				
Were surrogate percent recoveries in all samples within the laboratory QC limits?	✓				
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?	✓				
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NR(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?					

00063129

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	8270
Prep Batch Number(s):	WG240111
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	May 16, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?			✓		
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			✓		
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?	✓				
Were ion abundance data within the method-required QC limits?	✓				
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?	✓				
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	8270
Prep Batch Number(s):	WG240111
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	May 16, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	8270
Prep Batch Number(s):	WG240111
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	May 16, 2007

EXCEPTIONS REPORT
ER# - Description
Footnotes:
(1) NA = Not applicable to method or project
(2) NR = Not reviewed
(3) ER# = Exception report number

Laboratory Data Package Cover Page

00063133

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each enviornmental sample that includes:

a) Items consistant with NELAC 5.13 or ISO/IEC 17025 Section 5.10

b) dilution factors,

c) preparation methods,

d) Cleanup methods, and

e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

a) Calculated recovery (%R) for each analyte, and

b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;

R6 Test reports/summary forms FOR laboratory control samples (LCSs) including:

a) LCS spiking amount,

b) Calculated %R for each analyte, and

c) The laboratory"s LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a) Samples associated with the MS/MSD clearly identified,

b) MS/MSD spiking amounts,

c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d) Calculated %R and relative percent differences (RPDs), and

e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) revocery and precision:

a) the amount of analyte measured in the duplicate,

b) the calculated RPD, and

c) the laboratory's QC limits for anlytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratoy in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: [] This laboratory is an in-house laboratory controlled by the person repsonding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is trus.

MAREN M. BEERY	Maren Beery	Chemist III	May 18, 2007
Name (Printed)	Signature	Official Title (printed)	DATE

RG-366/TRRP-13 December 2002 A1

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	6010
Prep Batch Number(s):	WG240098
Reviewer Name:	MAREN M. BEERY
LRC Date:	May 18, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?			✓		
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <RL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NR(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?					
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?			✓		
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <RL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?	✓				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	✓				
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NR(2)	ER(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	6010
Prep Batch Number(s):	WG240098
Reviewer Name:	MAREN M. BEERY
LRC Date:	May 18, 2007

EXCEPTIONS REPORT
ER# - Description
Footnotes:
(1) NA = Not applicable to method or project
(2) NR = Not reviewed
(3) ER# = Exception report number

Laboratory Data Package Cover Page

00063138

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each enviornmental sample that includes:

a) Items consistant with NELAC 5.13 or ISO/IEC 17025 Section 5.10

b) dilution factors,

c) preparation methods,

d) Cleanup methods, and

e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

a) Calculated recovery (%R) for each analyte, and

b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;

R6 Test reports/summary forms FOR laboratory control samples (LCSs) including:

a) LCS spiking amount,

b) Calculated %R for each analyte, and

c) The laboratory"s LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a) Samples associated with the MS/MSD clearly identified,

b) MS/MSD spiking amounts,

c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d) Calculated %R and relative percent differences (RPDs), and

e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) revocery and precision:

a) the amount of analyte measured in the duplicate,

b) the calculated RPD, and

c) the laboratory's QC limits for anlytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratoy in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: [] This laboratory is an in-house laboratory controlled by the person repsonding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is trus.

LESLIE S. BUCINA	Leslie Bucina	Metals Supervisor	May 18, 2007
Name (Printed)	Signature	Official Title (printed)	DATE

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	6020
Prep Batch Number(s):	WG240228
Reviewer Name:	LESLIE S. BUCINA
LRC Date:	May 17, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <RL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NR(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?					
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?			✓		
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?		✓			ER1
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <RL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?	✓				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	✓				
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NR(2)	ER(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	6020
Prep Batch Number(s):	WG240228
Reviewer Name:	LESLIE S. BUCINA
LRC Date:	May 17, 2007

EXCEPTIONS REPORT
ER1 - WG240228(6020) - Due to continuing calibration verification failure for cadmium and chromium on 16-May-2007 at 20:50, client sample 01 and all batch QA/QC samples were reanalyzed on a later calibration which was compliant for cadmium and chromium.
Footnotes:
(1) NA = Not applicable to method or project
(2) NR = Not reviewed
(3) ER# = Exception report number

Laboratory Data Package Cover Page

00063143

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each enviornmental sample that includes:

a) Items consistant with NELAC 5.13 or ISO/IEC 17025 Section 5.10

b) dilution factors,

c) preparation methods,

d) Cleanup methods, and

e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

a) Calculated recovery (%R) for each analyte, and

b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;

R6 Test reports/summary forms FOR laboratory control samples (LCSs) including:

a) LCS spiking amount,

b) Calculated %R for each analyte, and

c) The laboratory"s LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a) Samples associated with the MS/MSD clearly identified,

b) MS/MSD spiking amounts,

c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d) Calculated %R and relative percent differences (RPDs), and

e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) revocery and precision:

a) the amount of analyte measured in the duplicate,

b) the calculated RPD, and

c) the laboratory's QC limits for anlytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratoy in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: [] This laboratory is an in-house laboratory controlled by the person repsonding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is trus.

LESLIE S. BUCINA	Leslie Bucina	Metals Supervisor	May 16, 2007
Name (Printed)	Signature	Official Title (printed)	DATE

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	7470A
Prep Batch Number(s):	WG240257
Reviewer Name:	LESLIE S. BUCINA
LRC Date:	May 16, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <RL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NR(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?					
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?			✓		
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <RL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	✓				
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NR(2)	ER(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	7470A
Prep Batch Number(s):	WG240257
Reviewer Name:	LESLIE S. BUCINA
LRC Date:	May 16, 2007

EXCEPTIONS REPORT
ER# - Description
Footnotes:
(1) NA = Not applicable to method or project
(2) NR = Not reviewed
(3) ER# = Exception report number

Laboratory Data Package Cover Page

00063148

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each enviornmental sample that includes:

a) Items consistant with NELAC 5.13 or ISO/IEC 17025 Section 5.10

b) dilution factors,

c) preparation methods,

d) Cleanup methods, and

e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

a) Calculated recovery (%R) for each analyte, and

b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;

R6 Test reports/summary forms FOR laboratory control samples (LCSs) including:

a) LCS spiking amount,

b) Calculated %R for each analyte, and

c) The laboratory"s LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a) Samples associated with the MS/MSD clearly identified,

b) MS/MSD spiking amounts,

c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d) Calculated %R and relative percent differences (RPDs), and

e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) revocery and precision:

a) the amount of analyte measured in the duplicate,

b) the calculated RPD, and

c) the laboratory's QC limits for anlytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratoy in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: [] This laboratory is an in-house laboratory controlled by the person repsonding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is trus.

MICHAEL D. COCHRAN		Semivolatiles Lab Supervisor	May 16, 2007
Name (Printed)	Signature	Official Title (printed)	DATE

RG-366/TRRP-13 December 2002 A1

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	8082
Prep Batch Number(s):	WG240128
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	May 14, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?			✓		
Were % moisture (or solids) reported for all soil and sediment samples?			✓		
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?	✓				
Were surrogate percent recoveries in all samples within the laboratory QC limits?	✓				
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?	✓				
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NR(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?					

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	8082
Prep Batch Number(s):	WG240128
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	May 14, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?			✓		
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			✓		
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	8082
Prep Batch Number(s):	WG240128
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	May 14, 2007

Description	Yes	No	NA(1)	NR(2)	ER(3)
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

KEMRON Environmental Services
Laboratory Review Checklist

Laboratory Name:	KEMRON
Laboratory Log Number:	L0705163
Project Name:	798-LONGHORN
Method:	8082
Prep Batch Number(s):	WG240128
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	May 14, 2007

EXCEPTIONS REPORT
ER# - Description
Footnotes:
(1) NA = Not applicable to method or project
(2) NR = Not reviewed
(3) ER# = Exception report number

2.1 Semivolatiles Data

2.1.1 Semivolatiles GC/MS Data (8270)

2.1.1.1 Summary Data

KEMRON ENVIRONMENTAL SERVICES
GC/MS SEMIVOLATILE ORGANICS

KEMRON Login No.: L0705163

METHOD

Preparation: Soils - SW-846 3545; Waters - SW-846 3510C or 3520C

Analysis: SW-846 8270C

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

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

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Samples: All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak

In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.

This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.

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

Reason #4: System Establishes Incorrect Baseline

There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous

Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

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

Analyst: ASP

Approved: 14-MAY-07

LABORATORY REPORT

L0705163

00063159

05/18/07 15:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Biulding
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Diane Mever

Account Number: 2773
Work ID: LHAAP

P.O. Number: 200328

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
03SB03-01-SPLP	L0705163-01	8270C	1	05-MAY-07
06SB01-01-SPLP	L0705163-02	8270C	1	05-MAY-07
07SB04-01-SPLP	L0705163-03	8270C	1	05-MAY-07
68SB01-01-SPLP	L0705163-08	8270C	1	05-MAY-07
64SB03-01-SPLP	L0705163-09	8270C	1	05-MAY-07

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063160

Sample Number: **L0705163-01**
Client ID: **03SB03-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240262**
Collect Date: **05/03/2007 14:00**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **ASP**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS5**
Prep Date: **05/11/2007 09:30**
Cal Date: **05/07/2007 18:51**
Run Date: **05/11/2007 17:15**
File ID: **5M46256**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Bis(2-Chloroethyl)ether	111-44-4		U	5.00	2.50
N-Nitroso-di-n-propylamine	621-64-7		U	5.00	2.50
2-Nitrophenol	88-75-5		U	5.00	2.50
Atrazine	1912-24-9		U	20.0	10.0
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.00	2.50
Hexachlorobutadiene	87-68-3		U	5.00	2.50
2,4,6-Trichlorophenol	88-06-2		U	5.00	2.50
2-Nitroaniline	88-74-4		U	25.0	12.5
2,6-Dinitrotoluene	606-20-2		U	5.00	2.50
3-Nitroaniline	99-09-2		U	25.0	12.5
2,4-Dinitrotoluene	121-14-2		U	5.00	2.50
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.00	2.50
4-Nitroaniline	100-01-6		U	25.0	12.5
4-Bromophenyl-phenylether	101-55-3		U	5.00	2.50
Hexachlorobenzene	118-74-1		U	5.00	2.50
Pentachlorophenol	87-86-5		U	25.0	12.5
3,3'-Dichlorobenzidine	91-94-1		U	10.0	2.50
Benzo(a)anthracene	56-55-3		U	5.00	2.50
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.00	2.50
Benzo(b)fluoranthene	205-99-2		U	5.00	2.50
Benzo(k)fluoranthene	207-08-9		U	5.00	2.50
Benzo(a)pyrene	50-32-8		U	5.00	2.50
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.00	2.50
Dibenzo(a,h)Anthracene	53-70-3		U	5.00	2.50

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	32.6	21	100	
Phenol-d5	21.1	10	94	
Nitrobenzene-d5	59.2	35	114	
2-Fluorobiphenyl	56.5	43	116	
2,4,6-Tribromophenol	53.4	10	123	
p-Terphenyl-d14	74.5	33	141	

U Not detected at or above adjusted sample detection limit

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063161

Sample Number: **L0705163-02**
Client ID: **06SB01-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240262**
Collect Date: **05/04/2007 07:30**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **ASP**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS5**
Prep Date: **05/11/2007 09:30**
Cal Date: **05/07/2007 18:51**
Run Date: **05/11/2007 17:49**
File ID: **5M46257**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Bis(2-Chloroethyl)ether	111-44-4		U	5.00	2.50
N-Nitroso-di-n-propylamine	621-64-7		U	5.00	2.50
2-Nitrophenol	88-75-5		U	5.00	2.50
Atrazine	1912-24-9		U	20.0	10.0
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.00	2.50
Hexachlorobutadiene	87-68-3		U	5.00	2.50
2,4,6-Trichlorophenol	88-06-2		U	5.00	2.50
2-Nitroaniline	88-74-4		U	25.0	12.5
2,6-Dinitrotoluene	606-20-2		U	5.00	2.50
3-Nitroaniline	99-09-2		U	25.0	12.5
2,4-Dinitrotoluene	121-14-2		U	5.00	2.50
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.00	2.50
4-Nitroaniline	100-01-6		U	25.0	12.5
4-Bromophenyl-phenylether	101-55-3		U	5.00	2.50
Hexachlorobenzene	118-74-1		U	5.00	2.50
Pentachlorophenol	87-86-5		U	25.0	12.5
3,3'-Dichlorobenzidine	91-94-1		U	10.0	2.50
Benzo(a)anthracene	56-55-3		U	5.00	2.50
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.00	2.50
Benzo(b)fluoranthene	205-99-2		U	5.00	2.50
Benzo(k)fluoranthene	207-08-9		U	5.00	2.50
Benzo(a)pyrene	50-32-8		U	5.00	2.50
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.00	2.50
Dibenzo(a,h)Anthracene	53-70-3		U	5.00	2.50

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	33.2	21	100	
Phenol-d5	21.4	10	94	
Nitrobenzene-d5	58.1	35	114	
2-Fluorobiphenyl	56.6	43	116	
2,4,6-Tribromophenol	54.4	10	123	
p-Terphenyl-d14	62.7	33	141	

U Not detected at or above adjusted sample detection limit

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063162

Sample Number: **L0705163-03**
Client ID: **07SB04-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240262**
Collect Date: **05/04/2007 08:10**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **ASP**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS5**
Prep Date: **05/11/2007 09:30**
Cal Date: **05/07/2007 18:51**
Run Date: **05/11/2007 18:22**
File ID: **5M46258**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Bis(2-Chloroethyl)ether	111-44-4		U	5.00	2.50
N-Nitroso-di-n-propylamine	621-64-7		U	5.00	2.50
2-Nitrophenol	88-75-5		U	5.00	2.50
Atrazine	1912-24-9		U	20.0	10.0
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.00	2.50
Hexachlorobutadiene	87-68-3		U	5.00	2.50
2,4,6-Trichlorophenol	88-06-2		U	5.00	2.50
2-Nitroaniline	88-74-4		U	25.0	12.5
2,6-Dinitrotoluene	606-20-2		U	5.00	2.50
3-Nitroaniline	99-09-2		U	25.0	12.5
2,4-Dinitrotoluene	121-14-2		U	5.00	2.50
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.00	2.50
4-Nitroaniline	100-01-6		U	25.0	12.5
4-Bromophenyl-phenylether	101-55-3		U	5.00	2.50
Hexachlorobenzene	118-74-1		U	5.00	2.50
Pentachlorophenol	87-86-5		U	25.0	12.5
3,3'-Dichlorobenzidine	91-94-1		U	10.0	2.50
Benzo(a)anthracene	56-55-3		U	5.00	2.50
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.00	2.50
Benzo(b)fluoranthene	205-99-2		U	5.00	2.50
Benzo(k)fluoranthene	207-08-9		U	5.00	2.50
Benzo(a)pyrene	50-32-8		U	5.00	2.50
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.00	2.50
Dibenzo(a,h)Anthracene	53-70-3		U	5.00	2.50

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	34.8	21	100	
Phenol-d5	23.3	10	94	
Nitrobenzene-d5	63.1	35	114	
2-Fluorobiphenyl	60.2	43	116	
2,4,6-Tribromophenol	56.2	10	123	
p-Terphenyl-d14	48.3	33	141	

U Not detected at or above adjusted sample detection limit

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063163

Sample Number: **L0705163-08**
Client ID: **68SB01-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240262**
Collect Date: **05/04/2007 14:05**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **ASP**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS5**
Prep Date: **05/11/2007 09:30**
Cal Date: **05/07/2007 18:51**
Run Date: **05/11/2007 18:56**
File ID: **5M46259**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Bis(2-Chloroethyl)ether	111-44-4		U	5.00	2.50
N-Nitroso-di-n-propylamine	621-64-7		U	5.00	2.50
2-Nitrophenol	88-75-5		U	5.00	2.50
Atrazine	1912-24-9		U	20.0	10.0
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.00	2.50
Hexachlorobutadiene	87-68-3		U	5.00	2.50
2,4,6-Trichlorophenol	88-06-2		U	5.00	2.50
2-Nitroaniline	88-74-4		U	25.0	12.5
2,6-Dinitrotoluene	606-20-2		U	5.00	2.50
3-Nitroaniline	99-09-2		U	25.0	12.5
2,4-Dinitrotoluene	121-14-2		U	5.00	2.50
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.00	2.50
4-Nitroaniline	100-01-6		U	25.0	12.5
4-Bromophenyl-phenylether	101-55-3		U	5.00	2.50
Hexachlorobenzene	118-74-1		U	5.00	2.50
Pentachlorophenol	87-86-5		U	25.0	12.5
3,3'-Dichlorobenzidine	91-94-1		U	10.0	2.50
Benzo(a)anthracene	56-55-3		U	5.00	2.50
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.00	2.50
Benzo(b)fluoranthene	205-99-2		U	5.00	2.50
Benzo(k)fluoranthene	207-08-9		U	5.00	2.50
Benzo(a)pyrene	50-32-8		U	5.00	2.50
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.00	2.50
Dibenzo(a,h)Anthracene	53-70-3		U	5.00	2.50

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	38.6	21	100	
Phenol-d5	25.2	10	94	
Nitrobenzene-d5	66.6	35	114	
2-Fluorobiphenyl	64.6	43	116	
2,4,6-Tribromophenol	60.4	10	123	
p-Terphenyl-d14	76.2	33	141	

U Not detected at or above adjusted sample detection limit

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063164

Sample Number: **L0705163-09**
Client ID: **64SB03-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240262**
Collect Date: **05/04/2007 14:50**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **ASP**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS5**
Prep Date: **05/11/2007 09:30**
Cal Date: **05/07/2007 18:51**
Run Date: **05/11/2007 19:30**
File ID: **5M46260**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Bis(2-Chloroethyl)ether	111-44-4		U	5.00	2.50
N-Nitroso-di-n-propylamine	621-64-7		U	5.00	2.50
2-Nitrophenol	88-75-5		U	5.00	2.50
Atrazine	1912-24-9		U	20.0	10.0
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.00	2.50
Hexachlorobutadiene	87-68-3		U	5.00	2.50
2,4,6-Trichlorophenol	88-06-2		U	5.00	2.50
2-Nitroaniline	88-74-4		U	25.0	12.5
2,6-Dinitrotoluene	606-20-2		U	5.00	2.50
3-Nitroaniline	99-09-2		U	25.0	12.5
2,4-Dinitrotoluene	121-14-2		U	5.00	2.50
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.00	2.50
4-Nitroaniline	100-01-6		U	25.0	12.5
4-Bromophenyl-phenylether	101-55-3		U	5.00	2.50
Hexachlorobenzene	118-74-1		U	5.00	2.50
Pentachlorophenol	87-86-5		U	25.0	12.5
3,3'-Dichlorobenzidine	91-94-1		U	10.0	2.50
Benzo(a)anthracene	56-55-3		U	5.00	2.50
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.00	2.50
Benzo(b)fluoranthene	205-99-2		U	5.00	2.50
Benzo(k)fluoranthene	207-08-9		U	5.00	2.50
Benzo(a)pyrene	50-32-8		U	5.00	2.50
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.00	2.50
Dibenzo(a,h)Anthracene	53-70-3		U	5.00	2.50

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	38.7	21	100	
Phenol-d5	25.5	10	94	
Nitrobenzene-d5	65.5	35	114	
2-Fluorobiphenyl	64.0	43	116	
2,4,6-Tribromophenol	57.8	10	123	
p-Terphenyl-d14	70.6	33	141	

U Not detected at or above adjusted sample detection limit

2.1.1.2 QC Summary Data

Example 8270 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

RF = [(Ax) (Cis)] / [(Ais) (Cx)]

where:	Example
Ax = Area of the characteristic ion for the compound being measured:	1261197
Cis = Concentration of the specific internal standard (ug/mL)	40
Ais = Area of the characteristic ion of the specific internal standard	608044
Cx = Concentration of the compound in the standard being measured (ug/mL)	50
RF = Calculated Response Factor	**1.65935**

2.0 Calculating the concentration (C) of a compound in water using the data from the prep log and quantitation report: *

Cx = [(Ax) (Cis) (Vf) (D)] / [(Ais) (RF) (Vi)]

where:	Example
Ax = Area of the characteristic ion for the compound being measured	367250
Cis = Concentration of the specific internal standard (ug/mL)	40
Vf = Final volume of sample extract from prep log (mL)	1
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	511641
RF = Average RF from the ICAL	1.65935
Vi = Initial volume of sample extracted from prep log (mL)	1021
Cx = Concentration of the compound in the sample being measured (ug/mL)	0.016947
Cx = Concentration of the compound in the sample being measured (ug/L)	**16.947**

3.0 Calculating the concentration (C) of a compound in soil using the data from the prep log and quantitation report: *

Cx = [(Ax) (Cis) (Vf) (D)] / [(Ais) (RF) (Wi)]

where:	Example
Ax = Area of the characteristic ion for the compound being measured	367250
Cis = Concentration of the specific internal standard (ug/mL)	40
Vf = Final volume of sample extract from prep log (mL)	1
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	511641
RF = Average RF from the ICAL	1.65935
Wi = Initial weight of sample extracted (g) from prep log	30
Cx = Concentration of the compound in the sample being measured (ug/g)	0.576763
Cx = Concentration of the compound in the sample being measured (ug/kg)	**576.7627**

Dry weight correction:

Percent solids (PCT_S)	50
Cd = (Cx) (100)/PCT_S	**1153.525** ug/kg

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

4.0 Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, y = mx + b

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve plot

b = intercept from curve plot

Step 2: Calculate y from Quantitation Report

y = 16790/784838 = 0.02139

Step 3: Solve for x

x = (y - b)/m = [(0.02139 -(- 0.0435)]/ 0.0783 = 0.829

Step 4: Solve for analyte concentration Cx

Cx = Cis (x) = (25.0)(0.829) = 20.72 ug/L

Example Spreadsheet Calculation:

Slope from curve, m:	0.0783	
Intercept from curve, b:	-0.0435	
Area of analyte, Ax:	16790	
Area of Internal Standard , Ais:	784484	
Concentration of IS, Cis	25.00	ug/L
Response Ratio (y) :	0.021403	
Amount Ratio:	0.828897	
Concentration (Cx):	20.72241	ug/L

5.0 Concentration from Quadratic Regression

Step 1 - Retrieve Curve Data from Plot, y = Ax^2 + Bx + C
Where:
Ax^2 + Bx + (C - y) = 0
A, B, C = constants from the ICAL quadratic regression
y = Response ratio = Area of analyte/Area of internal standard (IS)
x = Amount ratio = Concentration of analyte/concentration of IS

Step 2: Calculate y from Quantitation Report

y = Ax/Ais

Step 3: Solve for x using the quadratic formula
Ax^2 + Bx + C - y = 0

$$x = \frac{b \pm \sqrt{\left(b^2 - 4a(c - y)\right)}}{2a}$$ (Two possible solutions)

Step 4: Solve for analyte concentration Cx

Cx = (Cis)(Amount ratio)

Example Spreadsheet Calculation:

Value of A from plot:	**0.0259**	
Value of B from plot:	**0.0596**	
Value of C from plot:	**-0.0165**	
Area of analyte from quantitation report:	**203233**	
Area of IS from quantiation report:	**1425653**	
Response ratio, y:	**0.142554**	
C - y:	**-0.15905**	
Root 1 - Computed amount ratio , X1:	**-3.88278**	
Root 2 - Computed amount ratio , X2:	**1.581623**	use this solution
Concentration of IS, Cis:	**40.00**	
Concentration of analyte, Cx:	**63.26**	ug/L

Sample Extract Log Sheet R1204208 000

Parameter: BNA H2O SOP #: EXB08 Revision #: 11
Extraction Analyst(s): CAF, EL, CPD TV/KD Analyst(s): CSH
Date/Time Extracted: 5-11-07 @ 0930 Date TV/KD: 5-11-7
Spike/Surrogate Analyst: CAF Witness: CSH
Surrogate #: STD18622 #9 Earliest Hold Date: 5/17
Spike #: A = STD18827 #2 Spike #: B = —

Extraction Work Group WG 240111

Extract Relinquished By: CSH
Extract Received By & Date: CAM 5/11/07

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank		✓		✓	1000 mL	500 µL		1 mL	T				WG 240111-01
2	LCS		✓		✓	"	"	500 µL	"	C				WG " -02
3	LCS Dup		✓		✓	"	"	"	"	"				WG " -03
4	05-259-05	625-SAE	✓		✓	960 mL	"		"	"	✓			
5	05-266-01	"	✓		✓	980 mL	"		"	"				
6	SPKBLK 5/9	827-SBLP	✓		✓	950 mL	"		"	T				W6239968-01
7	05-163-01		✓		✓	1000 mL	"		"	"				
8	-02		✓		✓	"	"		"	"				
9	-03		✓		✓	"	"		"	"				
10	-08		✓		✓	"	"		"	"				
11	-09	"	✓		✓	"	"		"	"				
12	05-142-01	827-TC	✓		✓	100 mL	"		"	"				TCF lot: 5/09
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CSH 5-11-7

Methylene Chloride Lot #: ED2E45
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: Fortified Lot #: RGT11401
Reagent: 10N NaOH Lot #: RGT11575
Reagent: — Lot #: —
Acid: 1:1 H_2SO_4 Lot #: RGT11406
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: CDA12125

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Chris Hill Date: 5-11-7

Extraction Notes For Volume # 279 Page # 171

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

KEMRON ENVIRONMENTAL SERVICES

TCLP Non-Volatile

Analyst(s): Rac
Date: 05-09-07

Analyst/Date		Analyst/Date	
Rac 5-09-07		Rac 5-10-07	
Time On	Temp On °C	Time Off	Temp Off °C
1600	23	0800	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
G 21	05-163-01	ME 8270	1312	SFR-173	S/S	100		✓	100.03	2000
G 14	02	〃	〃	〃	〃	〃		〃	100.04	〃
G 22	03	〃	〃	〃	〃	〃		〃	100.00	〃
D	04	ME	〃	〃	〃	〃		〃	100.00	〃
D	05	〃	〃	〃	〃	〃		〃	100.02	〃
D	06	〃	〃	〃	〃	〃		〃	100.01	〃
G-3	07	8082	〃	〃	〃	〃		〃	100.05	〃
G-9	08	8270	〃	〃	〃	〃		〃	100.04	〃
G-29	09	〃 8082	〃	〃	〃	〃		〃	100.00	〃
N/A	FBLK	ME 〃 〃	〃	〃	N/A	N/A		〃	2000	〃

Rac 5-09-07

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

KEMRON Environmental Services

Instrument Run Log

00063171

Instrument: HPMS5 Dataset: 050707

Analyst1: ASP Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 19024

Column 1 ID: RXI-5MS Column 2 ID: NA

Workgroups: WG239643, WG239820, ICAL

Internal STD: STD17489 Surrogate STD: NA Calibration STD

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M46139	WG239693-01 DFTPP STD	1	1	STD18296	05/07/07 11:00
2	5M46140	WG239693-02 MEGAMIX STD	1	1	STD18025	05/07/07 11:26
3	5M46141	WG239693-01 DFTPP STD	1	1	STD18025	05/07/07 11:59
4	5M46142	WG239693-01 DFTPP STD	1	1	STD18296	05/07/07 12:55
5	5M46143	WG239693-02 50PPM MEGAMIX STD	1	1	STD18025	05/07/07 13:15
6	5M46144	WG239693-03 3PPM MEGAMIX STD	1	1	STD18025	05/07/07 13:50
7	5M46145	WG239693-04 10PPM MEGAMIX STD	1	1	STD18025	05/07/07 14:23
8	5M46146	WG239693-05 15PPM MEGAMIX STD	1	1	STD18025	05/07/07 14:57
9	5M46147	WG239693-06 25PPM MEGAMIX STD	1	1	STD18025	05/07/07 15:31
10	5M46148	WG239693-07 80PPM MEGAMIX STD	1	1	STD18025	05/07/07 16:04
11	5M46149	WG239693-08 100PPM MEGAMIX STD	1	1	STD18025	05/07/07 16:38
12	5M46150	WG239693-09 120PPM MEGAMIX STD	1	1	STD18025	05/07/07 17:12
13	5M46151	WG239693-10 50PPM BNA ALT STD	1	1	STD17822	05/07/07 17:45
14	5M46152	WG239693-11 50PPM A9 ALT STD	1	1	STD16804	05/07/07 18:18
15	5M46153	WG239693-02 50PPM MEGAMIX STD	1	1	STD18025	05/07/07 18:51
16	5M46154	WG239180-01 BLK EP278P115 SOIL	7	1	SOIL	05/07/07 19:25
17	5M46155	L0705010-06 SOIL	7	1	SOIL	05/07/07 19:59
18	5M46156	WG239537-02 BLK EP279P125 RR	1	1		05/07/07 20:32
19	5M46157	L0705120-01	1	1		05/07/07 21:06
20	5M46158	L0705120-03	1	1		05/07/07 21:40
21	5M46159	L0705074-01 TCLP	17	1		05/07/07 22:14
22	5M46160	L0705052-01 2X	1	2		05/07/07 22:48
23	5M46161	L0705052-03 2X	1	2		05/07/07 23:22
24	5M46162	L0705052-05 2X	1	2		05/07/07 23:56
25	5M46163	L0705052-07 5X	1	5		05/08/07 00:30
26	5M46164	BAKE OUT	1	1		05/08/07 01:04
27	5M46165	BAKE OUT	1	1		05/08/07 01:38
28	5M46166	BAKE OUT	1	1		05/08/07 02:12

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X			
	Pentachlorophenol failed high.			
5				
	Pentachlorophenol still high, fix by running curve.			

Page: 1 of 2 Approved: 08-MAY-07

KEMRON Environmental Services

Instrument Run Log

00063172

Instrument: HPMS5 Dataset: 050707

Analyst1: ASP Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 19024

Column 1 ID: RXI-5MS Column 2 ID: NA

Workgroups: WG239643, WG239820, ICAL

Internal STD: STD17489 Surrogate STD: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
25				
	Surr 2FP low.			

Page: 2 of 2 Approved: 08-MAY-07

KEMRON Environmental Services

Instrument Run Log

00063173

Instrument: HPMS5 Dataset: 051007
Analyst1: ASP Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 14
Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 19111

Column 1 ID: RXI-5MS Column 2 ID: NA

Workgroups: WG240157, WG240245

Internal STD: STD19283 Surrogate STD: NA Calibration STD

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M46218	WG240004-01 DFTPP STD	1	1	STD18296	05/10/07 09:25
2	5M46219	WG240004-02 50PPM MEGAMIX STD	1	1	STD18025	05/10/07 09:45
3	5M46220	200ppm primer	1	1	STD18025	05/10/07 10:22
4	5M46221	200ppm primer	1	1	STD18025	05/10/07 10:55
5	5M46222	bake out	1	1	STD18025	05/10/07 11:30
6	5M46223	bake out	1	1	STD18025	05/10/07 12:04
7	5M46224	WG240004-01 DFTPP STD	1	1	STD18296	05/10/07 13:17
8	5M46225	WG240004-02 50PPM MEGAMIX STD	1	1	STD18025	05/10/07 13:36
9	5M46226	WG239536-01 BLK EP279P143	1	1		05/10/07 14:09
10	5M46227	WG239536-02 LCS EP279P143	1	1		05/10/07 14:43
11	5M46228	WG239536-03 DUP EP279P143	1	1		05/10/07 15:17
12	5M46229	WG239510-01 BLK EP278P137	11	1		05/10/07 15:51
13	5M46230	WG239510-02 LCS EP278P137	11	1		05/10/07 16:25
14	5M46231	WG239510-03 DUP EP278P137	11	1		05/10/07 16:59
15	5M46232	WG240060-01 50ppm tcl std	1	1		05/10/07 17:33
16	5M46233	WG240060-02 3ppm tcl std	1	1		05/10/07 18:07
17	5M46234	WG240060-03 15ppm tcl std	1	1		05/10/07 18:41
18	5M46235	WG240060-04 25ppm tcl std	1	1		05/10/07 19:14
19	5M46236	WG240060-05 80ppm tcl std	1	1		05/10/07 19:48
20	5M46237	WG240060-06 100ppm tcl std	1	1		05/10/07 20:22
21	5M46238	WG240060-07 50ppm tcl alt std	1	1		05/10/07 20:55
22	5M46239	L0705065-21	1	1		05/10/07 21:29
23	5M46240	L0705065-22 10X	1	10		05/10/07 22:03
24	5M46241	L0705065-23	1	1		05/10/07 22:38
25	5M46242	L0705105-01 20X	11	20		05/10/07 23:12
26	5M46243	L0705105-01 200X	11	200		05/10/07 23:46
27	5M46244	BAKE OUT	1	1		05/11/07 00:20
28	5M46245	BAKE OUT	1	1		05/11/07 00:54
29	5M46246	BAKE OUT	1	1		05/11/07 01:29

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	CCC compounds low.			
9				

Approved: 14-MAY-07

KEMRON Environmental Services

Instrument Run Log

00063174

Instrument: HPMS5 Dataset: 051007

Analyst1: ASP Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 19111

Column 1 ID: RXI-5MS Column 2 ID: NA

Workgroups: WG240157, WG240245

Internal STD: STD19283 Surrogate STD: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
			Bis(2-ethylhexyl)phthalate high in blk, all samples sent for RE.	
12				
	Surr NBZ low.			
13				
	Surr NBZ low. 3 compounds low.			
14				
	Surr NBZ low. 3 compounds low.			
22				
	bis(2-ethylhexyl)phthalate in blk, sent for RE.			
23				
	bis(2-ethylhexyl)phthalate in blk, sent for RE. Surr NBZ, and TPH low.			
24				
	bis(2-ethylhexyl)phthalate in blk, sent for RE.			
25	X	200	Over Calibration Range	42

Approved: 14-MAY-07

KEMRON Environmental Services

Instrument Run Log

00063175

Instrument: HPMS5 Dataset: 051107

Analyst1: ASP Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 19122

Column 1 ID: RXI-5MS Column 2 ID: NA

Workgroups: WG240264, WG240261, WG240262

Internal STD: STD19283 Surrogate STD: NA Calibration STD

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M46247	WG240135-01 DFTPP STD	1	1	STD18296	05/11/07 12:25
2	5M46248	WG240135-02 50PPM MEGAMIX STD	1	1	STD18025	05/11/07 12:43
3	5M46249	50PPM TCL STD	1	1	STD16614	05/11/07 13:17
4	5M46250	WG239699-02 BLK EP279P157	1	1		05/11/07 13:51
5	5M46251	WG239699-03 LCS EP279P157	1	1		05/11/07 14:25
6	5M46252	WG240111-01 BLK EP279P171	2	1		05/11/07 14:59
7	5M46253	WG240111-02 LCS EP279P171	2	1		05/11/07 15:33
8	5M46254	WG240111-03 DUP EP279P171	2	1		05/11/07 16:07
9	5M46255	WG239968-01 SPLP BLK EP279P171	18	1		05/11/07 16:41
10	5M46256	L0705163-01 SPLP	18	1		05/11/07 17:15
11	5M46257	L0705163-02 SPLP	18	1		05/11/07 17:49
12	5M46258	L0705163-03 SPLP	18	1		05/11/07 18:22
13	5M46259	L0705163-08 SPLP	18	1		05/11/07 18:56
14	5M46260	L0705163-09 SPLP	18	1		05/11/07 19:30
15	5M46261	WG239901-01 BLK EP278P165 SOIL RR	7	1	SOIL	05/11/07 20:03
16	5M46262	L0705210-01	1	1		05/11/07 20:37
17	5M46263	L0705072-01	1	1		05/11/07 21:11
18	5M46264	L0705211-01	1	1		05/11/07 21:45
19	5M46265	L0704650-15	1	1		05/11/07 22:18
20	5M46266	L0705162-10 SOIL	7	1	SOIL	05/11/07 22:52
21	5M46267	L0705142-01 TCLP	17	1		05/11/07 23:26
22	5M46268	L0705266-01	2	1		05/12/07 00:01
23	5M46269	L0705259-05 2X	2	2		05/12/07 00:35
24	5M46270	BAKE OUT	1	1		05/12/07 01:09
25	5M46271	BAKE OUT	1	1		05/12/07 01:43
26	5M46272	BAKE OUT	1	1		05/12/07 02:17
27	5M46273	BAKE OUT	1	1		05/12/07 02:51
28	5M46274	L0705065-22 10X	1	10		05/14/07 09:56
29	5M46275	L0705065-23	1	1		05/14/07 10:30
30	5M46276	BAKE OUT	1	1		05/14/07 11:04

Comments

Seq.	Rerun	Dil.	Reason	Analytes
8				
	1 compound low.			

Page: 1 of 2 Approved: 14-MAY-07

KEMRON Environmental Services

Instrument Run Log

00063176

Instrument: HPMS5 Dataset: 051107

Analyst1: ASP Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 19122

Column 1 ID: RXI-5MS Column 2 ID: NA

Workgroups: WG240264, WG240261, WG240262

Internal STD: STD19283 Surrogate STD: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
18				
	Surr 2FP low.			
19				
	Surr TPH low.			
22				
	Surr PHL< 10%. SMI.			
28				
	already reported, ran for confirmation			
29				
	already reported, ran for confirmation			

Page: 2 of 2 Approved: 14-MAY-07

KEMRON Environmental Services
Data Checklist

00063177

Date: 07-MAY-2007
Analyst: ASP
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Runlog ID: 16024
Analytical Workgroups: L0705010, L0705120, L0705074, L0705052

System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	X
Reruns	X
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ASP
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the reasonableness of the results	X
Comments:	

Primary Reviewer:
08-MAY-2007

Secondary Reviewer:
08-MAY-2007

Generated: MAY-08-2007 13:42:49

KEMRON Environmental Services
Data Checklist

00063178

Date: 10-MAY-2007
Analyst: ASP
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Runlog ID: 16129
Analytical Workgroups: L0705065, L0705105

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	X
Endrin/DDT breakdown (8081/MS)	X
Pentachlorophenol/benzidine tailing (MS)	X
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	X
Average RF	X
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	X
Continuing calibration blank (CCB) (IC)	NA
Special standards	X
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	X
Library searches (MS)	NA
Calculations & correct factors	NA
Compounds above calibration range	X
Reruns	X
Manual integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	ASP
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
14-MAY-2007

Secondary Reviewer:
14-MAY-2007

Generated: MAY-14-2007 12:53:46

KEMRON Environmental Services
Data Checklist

00063179

Date: 11-MAY-2007
Analyst: ASP
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Runlog ID: 16137
Analytical Workgroups: L0705163, L0705210, L0705072, L0705211, L0704650, L0705162, L0705142, L07052

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	X
Endrin/DDT breakdown (8081/MS)	X
Pentachlorophenol/benzidine tailing (MS)	X
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	X
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	X
Library searches (MS)	NA
Calculations & correct factors	NA
Compounds above calibration range	NA
Reruns	NA
Manual integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	ASP
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
14-MAY-2007

Secondary Reviewer:
14-MAY-2007

Generated: MAY-14-2007 15:51:14

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

00063180

Analytical Method: 8270C AAB#: WG240262

Login Number: L0705163

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
06SB01-01-SPLP	05/04/07	05/05/07	05/11/07	40	7.08	05/11/07	40	0.347	
07SB04-01-SPLP	05/04/07	05/05/07	05/11/07	40	7.06	05/11/07	40	0.369	
03SB03-01-SPLP	05/03/07	05/05/07	05/11/07	40	7.81	05/11/07	40	0.323	
64SB03-01-SPLP	05/04/07	05/05/07	05/11/07	40	6.78	05/11/07	40	0.417	
68SB01-01-SPLP	05/04/07	05/05/07	05/11/07	40	6.81	05/11/07	40	0.393	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 11/20/2006
Version 1.5 PDF File ID: 765983
Report generated 05/14/2007 16:59

KEMRON Environmental Services

SURROGATE STANDARDS

00063181

Login Number:L0705163 Method:8270

Instrument Id:HPMS5 CAL ID: HPMS5-07-MAY-07

Workgroup (AAB#):WG240262 Matrix:Leachate

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0705163-01	1.00	01	53.4	56.5	32.6	59.2	74.5	21.1
L0705163-02	1.00	01	54.4	56.6	33.2	58.1	62.7	21.4
L0705163-03	1.00	01	56.2	60.2	34.8	63.1	48.3	23.3
L0705163-08	1.00	01	60.4	64.6	38.6	66.6	76.2	25.2
L0705163-09	1.00	01	57.8	64.0	38.7	65.5	70.6	25.5
WG240111-01	1.00	01	49.3	51.7	29.1	52.4	84.5	18.6
WG240111-02	1.00	01	68.5	52.8	30.3	49.9	83.7	21.1
WG240111-03	1.00	01	59.6	45.0	24.7	43.6	80.2	16.9

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	10 - 123
2 - 2-Fluorobiphenyl	43 - 116
3 - 2-Fluorophenol	21 - 100
4 - Nitrobenzene-d5	35 - 114
5 - p-Terphenyl-d14	33 - 141
6 - Phenol-d5	10 - 94

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

KEMRON FORMS - Modified 09/27/2006
Version 1.5 PDF File ID: 765884
Report generated 05/14/2007 16:59

METHOD BLANK SUMMARY

00063182

Login Number: L0705163
Work Group: WG240262
Blank File ID: 5M46252
Blank Sample ID: WG240111-01
Prep Date: 05/11/07 09:30
Instrument ID: HPMS5
Analyzed Date: 05/11/07 14:59
Method: 8270C
Analyst: ASP

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG240111-02	5M46253	05/11/07 15:33	01
LCS2	WG240111-03	5M46254	05/11/07 16:07	01
03SB03-01-SPLP	L0705163-01	5M46256	05/11/07 17:15	01
06SB01-01-SPLP	L0705163-02	5M46257	05/11/07 17:49	01
07SB04-01-SPLP	L0705163-03	5M46258	05/11/07 18:22	01
68SB01-01-SPLP	L0705163-08	5M46259	05/11/07 18:56	01
64SB03-01-SPLP	L0705163-09	5M46260	05/11/07 19:30	01

KEMRON Environmental Services

METHOD BLANK REPORT

00063183

Login Number: L0705163 Prep Date: 05/11/07 09:30 Sample ID: WG240111-01
Instrument ID: HPMS5 Run Date: 05/11/07 14:59 Prep Method: 3510C
File ID: 5M46252 Analyst: ASP Method: 8270C
Workgroup (AAB#): WG240262 Matrix: Leachate Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS5-07-MAY-07

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Bis(2-Chloroethyl)ether	2.50	5.00	2.50	1	U
N-Nitroso-di-n-propylamine	2.50	5.00	2.50	1	U
2-Nitrophenol	2.50	5.00	2.50	1	U
Atrazine	10.0	20.0	10.0	1	U
Bis(2-Chloroethoxy)Methane	2.50	5.00	2.50	1	U
Hexachlorobutadiene	2.50	5.00	2.50	1	U
2,4,6-Trichlorophenol	2.50	5.00	2.50	1	U
2-Nitroaniline	12.5	25.0	12.5	1	U
2,6-Dinitrotoluene	2.50	5.00	2.50	1	U
3-Nitroaniline	12.5	25.0	12.5	1	U
2,4-Dinitrotoluene	2.50	5.00	2.50	1	U
4-Chlorophenyl-phenyl ether	2.50	5.00	2.50	1	U
4-Nitroaniline	12.5	25.0	12.5	1	U
4-Bromophenyl-phenylether	2.50	5.00	2.50	1	U
Hexachlorobenzene	2.50	5.00	2.50	1	U
Pentachlorophenol	12.5	25.0	12.5	1	U
3,3'-Dichlorobenzidine	2.50	10.0	2.50	1	U
Benzo(a)anthracene	2.50	5.00	2.50	1	U
bis(2-Ethylhexyl)phthalate	2.50	5.00	2.50	1	U
Benzo(b)fluoranthene	2.50	5.00	2.50	1	U
Benzo(k)fluoranthene	2.50	5.00	2.50	1	U
Benzo(a)pyrene	2.50	5.00	2.50	1	U
Indeno(1,2,3-cd)pyrene	2.50	5.00	2.50	1	U
Dibenzo(a,h)Anthracene	2.50	5.00	2.50	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	29.1	21 - 100	PASS
Phenol-d5	18.6	10 - 94	PASS
Nitrobenzene-d5	52.4	35 - 114	PASS
2-Fluorobiphenyl	51.7	43 - 116	PASS
2,4,6-Tribromophenol	49.3	10 - 123	PASS
p-Terphenyl-d14	84.5	33 - 141	PASS

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

KEMRON FORMS - Modified 12/07/2006
Version 1.5 PDF File ID: 765878
Report generated 05/14/2007 16:59

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

00063184

Login Number:L0705163 Analyst:ASP Prep Method:3510C
Instrument ID:HPMS5 Matrix:Leachate Method:8270C
Workgroup (AAB#):WG240262 Units:ug/L
Sample ID:WG240111-02 LCS File ID:5M46253 Run Date:05/11/2007 15:33
Sample ID:WG240111-03 LCS2 File ID:5M46254 Run Date:05/11/2007 16:07

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Bis(2-Chloroethyl)ether	50.0	25.9	51.8	50.0	22.3	44.7	14.7	30 - 120	45	
N-Nitroso-di-n-propylamine	50.0	27.7	55.5	50.0	23.9	47.8	14.9	35 - 130	51	
2-Nitrophenol	50.0	22.6	45.2	50.0	19.7	39.3	14.0	30 - 115	55	
Bis(2-Chloroethoxy)Methane	50.0	25.2	50.4	50.0	21.9	43.9	13.9	25 - 105	55	
Hexachlorobutadiene	50.0	24.9	49.8	50.0	21.4	42.9	14.9	25 - 105	59	
2,4,6-Trichlorophenol	50.0	28.6	57.1	50.0	24.8	49.6	14.1	40 - 120	60	
2-Nitroaniline	50.0	32.8	65.7	50.0	29.6	59.1	10.5	45 - 115	52	
2,6-Dinitrotoluene	50.0	33.9	67.8	50.0	29.1	58.2	15.2	45 - 120	56	
3-Nitroaniline	50.0	33.1	66.2	50.0	29.6	59.2	11.2	30 - 120	115	
2,4-Dinitrotoluene	50.0	41.2	82.4	50.0	37.9	75.9	8.19	50 - 139	56	
4-Chlorophenyl-phenyl ether	50.0	31.7	63.3	50.0	27.1	54.3	15.4	40 - 120	55	
4-Nitroaniline	50.0	35.1	70.1	50.0	32.8	65.7	6.58	45 - 135	95	
4-Bromophenyl-phenylether	50.0	29.9	59.9	50.0	25.4	50.8	16.4	40 - 115	48	
Hexachlorobenzene	50.0	36.1	72.2	50.0	31.8	63.6	12.6	50 - 130	55	
Pentachlorophenol	50.0	36.9	73.7	50.0	35.6	71.2	3.51	40 - 140	60	
3,3'-Dichlorobenzidine	50.0	40.0	80.0	50.0	38.5	77.0	3.81	30 - 140	119	
Benzo(a)anthracene	50.0	42.0	84.0	50.0	40.5	81.0	3.57	55 - 130	55	
bis(2-Ethylhexyl)phthalate	50.0	40.4	80.8	50.0	39.5	78.9	2.31	45 - 150	57	
Benzo(b)fluoranthene	50.0	42.0	84.0	50.0	39.6	79.3	5.79	45 - 125	60	
Benzo(k)fluoranthene	50.0	45.3	90.7	50.0	43.1	86.2	5.03	50 - 140	60	
Benzo(a)pyrene	50.0	44.9	89.8	50.0	42.9	85.7	4.67	55 - 135	62	
Indeno(1,2,3-cd)pyrene	50.0	41.7	83.4	50.0	39.3	78.6	5.94	45 - 135	83	
Dibenzo(a,h)Anthracene	50.0	41.5	83.1	50.0	39.2	78.4	5.84	40 - 125	86	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4,6-Tribromophenol	68.5	59.6	10 - 123	PASS
2-Fluorobiphenyl	52.8	45.0	43 - 116	PASS
2-Fluorophenol	30.3	24.7	21 - 100	PASS
Nitrobenzene-d5	49.9	43.6	35 - 114	PASS
p-Terphenyl-d14	83.7	80.2	33 - 141	PASS
Phenol-d5	21.1	16.9	10 - 94	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 02/08/2007
Version 1.5 PDF File ID:765881
Report generated 05/14/2007 16:59

DFTPP

Login Number: L0705163 Tune ID: WG239693-01
Instrument: HPMS5 Run Date: 05/07/2007
Analyst: ASP Run Time: 12:55
Workgroup: WG239693 File ID: 5M46142
Cal ID: HPMS5-07-MAY-07

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	33.1	33618	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	36.5	37088	PASS
70.0	69.0	0	2.00	0.208	77	PASS
127	198	40.0	60.0	45.6	46280	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	101509	PASS
199	198	5.00	9.00	6.92	7021	PASS
275	198	10.0	30.0	28.0	28416	PASS
365	198	1.00	100	3.14	3184	PASS
441	443	0.0100	100	80.0	15300	PASS
442	198	40.0	100	96.7	98192	PASS
443	442	17.0	23.0	19.5	19133	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG239693-03	STD	01	05/07/2007 13:50	
WG239693-04	STD	01	05/07/2007 14:23	
WG239693-05	STD	01	05/07/2007 14:57	
WG239693-06	STD	01	05/07/2007 15:31	
WG239693-07	STD	01	05/07/2007 16:04	
WG239693-08	STD	01	05/07/2007 16:38	
WG239693-09	STD	01	05/07/2007 17:12	
WG239693-10	SSCV	01	05/07/2007 17:45	
WG239693-11	SSCV	01	05/07/2007 18:18	
WG239693-02	STD-CCV	01	05/07/2007 18:51	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/12/2007
Version 1.3 PDF File ID: 765987
Report generated 05/14/2007 16:59

DFTPP

Login Number: L0705163
Instrument: HPMS5
Analyst: ASP
Workgroup: WG240004

Tune ID: WG240004-01
Run Date: 05/10/2007
Run Time: 13:17
File ID: 5M46224
Cal ID: HPMS5-07-MAY-07

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	35.4	33479	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	38.8	36685	PASS
70.0	69.0	0	2.00	0.297	109	PASS
127	198	40.0	60.0	45.0	42536	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	94616	PASS
199	198	5.00	9.00	6.78	6413	PASS
275	198	10.0	30.0	27.7	26250	PASS
365	198	1.00	100	3.16	2994	PASS
441	443	0.0100	100	59.8	9574	PASS
442	198	40.0	100	86.3	81666	PASS
443	442	17.0	23.0	19.6	16022	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG240060-01	STD-CCV	01	05/10/2007 17:33	
WG240060-02	STD	01	05/10/2007 18:07	
WG240060-03	STD	01	05/10/2007 18:41	
WG240060-04	STD	01	05/10/2007 19:14	
WG240060-05	STD	01	05/10/2007 19:48	
WG240060-06	STD	01	05/10/2007 20:22	
WG240060-07	SSCV	01	05/10/2007 20:55	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/12/2007
Version 1.3 PDF File ID: 765987
Report generated 05/14/2007 16:59

DFTPP

Login Number: L0705163
Instrument: HPMS5
Analyst: ASP
Workgroup: WG240135

Tune ID: WG240135-01
Run Date: 05/11/2007
Run Time: 12:25
File ID: 5M46247
Cal ID: HPMS5-07-MAY-07

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	34.1	35863	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	38.2	40189	PASS
70.0	69.0	0	2.00	0.637	256	PASS
127	198	40.0	60.0	45.2	47592	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	105285	PASS
199	198	5.00	9.00	7.06	7430	PASS
275	198	10.0	30.0	27.7	29165	PASS
365	198	1.00	100	3.01	3167	PASS
441	443	0.0100	100	82.4	14397	PASS
442	198	40.0	100	86.8	91338	PASS
443	442	17.0	23.0	19.1	17467	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG240135-02	CCV	01	05/11/2007 12:43	
WG240111-01	BLANK	01	05/11/2007 14:59	
WG240111-02	LCS	01	05/11/2007 15:33	
WG240111-03	LCS2	01	05/11/2007 16:07	
WG239968-01	FBLK	01	05/11/2007 16:41	
L0705163-01	03SB03-01-SPLP	01	05/11/2007 17:15	
L0705163-02	06SB01-01-SPLP	01	05/11/2007 17:49	
L0705163-03	07SB04-01-SPLP	01	05/11/2007 18:22	
L0705163-08	68SB01-01-SPLP	01	05/11/2007 18:56	
L0705163-09	64SB03-01-SPLP	01	05/11/2007 19:30	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/12/2007
Version 1.3 PDF File ID: 765987
Report generated 05/14/2007 16:59

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

00063188

Login Number: L0705163 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 07-MAY-07 18:51

ICAL Workgroup: WG239693 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD(R^2)
2,4,6-Trichlorophenol	CCC	0.3850	13.5		
2-Nitrophenol	CCC	0.2073	8.36		
Benzo[a]pyrene	CCC	1.299	4.79		
Hexachlorobutadiene	CCC	0.1986	2.74	1.00	
Pentachlorophenol	CCC	0.1296	24.0	0.997	
2,4-Dinitrophenol	SPCC	0.1524	36.2	0.998	
4-Nitrophenol	SPCC	0.1844	20.8		0.999
Hexachlorocyclopentadiene	SPCC	0.2563	28.2	0.996	
n-Nitrosodipropylamine	SPCC	1.003	5.77		
2,4-Dinitrotoluene		0.4480	9.38		
2,6-Dinitrotoluene		0.3640	5.08		
2-Nitroaniline		0.3595	10.7		
3,3'-Dichlorobenzidine		0.4018	6.92		
3-Nitroaniline		0.3398	10.4		
4-Bromophenyl Phenyl Ether		0.2988	4.04		
4-Chlorophenyl Phenyl Ether		0.7457	2.83		
4-Nitroaniline		0.3430	6.16		
Benzo[a]anthracene		1.280	3.40		
Benzo[b]fluoranthene		1.518	5.08		
Benzo[k]fluoranthene		1.374	4.13		
Dibenz[ah]anthracene		1.275	8.27		
Hexachlorobenzene		0.3171	3.53		
Indeno[1,2,3-cd]pyrene		1.474	7.28		
bis(2-Chloroethoxy)methane		0.4122	2.86		
bis(2-Chloroethyl)ether		0.9086	4.80		
bis(2-Ethylhexyl)phthalate		0.7942	5.03		

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

00063189

Login Number: L0705163 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-07 20:22

ICAL Workgroup: WG240060 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD(R^2)
Atrazine		0.2988	15.7		

R = Correlation coefficient; 0.995 minimum

R^2 = Coefficient of determination; 0.99 minimum

KEMRON Environmental Services

INITIAL CALIBRATION DATA

00063190

Login Number: L0705163 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 07-MAY-07 18:51

Column ID: F

Analyte	WG239693-02			WG239693-03			WG239693-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	50.0	350474.000	0.4098	3.00	17724.0000	0.2821	10.0	64720.0000	0.3429
2-Nitrophenol	50.0	330178.000	0.2198	3.00	18675.0000	0.1662	10.0	68044.0000	0.2047
Benzo[a]pyrene	50.0	2026217.00	1.333	3.00	123876.000	1.175	10.0	411244.000	1.298
Hexachlorobutadiene	50.0	296910.000	0.1976	3.00	21685.0000	0.1930	10.0	64892.0000	0.1952
Pentachlorophenol	50.0	165571.000	0.1228	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	50.0	122833.000	0.1436	NA	NA	NA	NA	NA	NA
4-Nitrophenol	50.0	147727.000	0.1727	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	50.0	218280.000	0.2552	3.00	7550.00000	0.1202	10.0	42347.0000	0.2243
n-Nitrosodipropylamine	50.0	412384.000	1.101	3.00	28580.0000	0.9762	10.0	87955.0000	1.038
2,4-Dinitrotoluene	50.0	422736.000	0.4943	3.00	22475.0000	0.3577	10.0	80397.0000	0.4259
2,6-Dinitrotoluene	50.0	327242.000	0.3826	3.00	20595.0000	0.3278	10.0	66145.0000	0.3504
2-Nitroaniline	50.0	306746.000	0.3587	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	50.0	696110.000	0.4137	3.00	42227.0000	0.3673	10.0	137574.000	0.3919
3-Nitroaniline	50.0	290229.000	0.3394	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	50.0	412164.000	0.3056	3.00	27361.0000	0.2851	10.0	84766.0000	0.2870
4-Chlorophenyl Phenyl Ether	50.0	663326.000	0.7756	3.00	44845.0000	0.7137	10.0	137645.000	0.7292
4-Nitroaniline	50.0	316574.000	0.3702	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	50.0	2198334.00	1.307	3.00	148344.000	1.290	10.0	461139.000	1.314
Benzo[b]fluoranthene	50.0	2274314.00	1.496	3.00	151782.000	1.440	10.0	466566.000	1.473
Benzo[k]fluoranthene	50.0	2205451.00	1.451	3.00	134773.000	1.279	10.0	454886.000	1.436
Dibenz[ah]anthracene	50.0	1989734.00	1.309	3.00	112015.000	1.063	10.0	387773.000	1.224
Hexachlorobenzene	50.0	439706.000	0.3260	3.00	29618.0000	0.3087	10.0	90548.0000	0.3065
Indeno[1,2,3-cd]pyrene	50.0	2296793.00	1.511	3.00	133066.000	1.262	10.0	450129.000	1.421
bis(2-Chloroethoxy)methane	50.0	654507.000	0.4356	3.00	44613.0000	0.3970	10.0	136937.000	0.4119
bis(2-Chloroethyl)ether	50.0	366236.000	0.9777	3.00	26674.0000	0.9111	10.0	80943.0000	0.9549
bis(2-Ethylhexyl)phthalate	50.0	1420372.00	0.8442	3.00	91542.0000	0.7962	10.0	287103.000	0.8180

KEMRON FORMS - Modified 10/13/2006
Version 1.6 PDF File ID: 765985
Report generated 05/14/2007 16:59

KEMRON Environmental Services

INITIAL CALIBRATION DATA

00063191

Login Number: L0705163 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 07-MAY-07 18:51

Column ID: F

Analyte	WG239693-05			WG239693-06			WG239693-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	15.0	113107.000	0.3641	25.0	233123.000	0.4002	80.0	1108196.00	0.4261
2-Nitrophenol	15.0	114123.000	0.2081	25.0	218549.000	0.2174	80.0	941449.000	0.2150
Benzo[a]pyrene	15.0	679454.000	1.234	25.0	1379676.00	1.343	80.0	6361401.00	1.340
Hexachlorobutadiene	15.0	104531.000	0.1906	25.0	204595.000	0.2036	80.0	899056.000	0.2053
Pentachlorophenol	15.0	38787.0000	0.07830	25.0	104403.000	0.1132	80.0	656387.000	0.1573
2,4-Dinitrophenol	15.0	20817.0000	0.06700	25.0	65239.0000	0.1120	80.0	489160.000	0.1881
4-Nitrophenol	15.0	39772.0000	0.1280	25.0	92278.0000	0.1584	80.0	529586.000	0.2036
Hexachlorocyclopentadiene	15.0	75091.0000	0.2418	25.0	177511.000	0.3047	80.0	852463.000	0.3277
n-Nitrosodipropylamine	15.0	145288.000	1.028	25.0	268773.000	1.041	80.0	1048467.00	0.9654
2,4-Dinitrotoluene	15.0	139146.000	0.4480	25.0	279038.000	0.4790	80.0	1218259.00	0.4684
2,6-Dinitrotoluene	15.0	109845.000	0.3536	25.0	217852.000	0.3740	80.0	968078.000	0.3722
2-Nitroaniline	15.0	124255.000	0.4000	25.0	240396.000	0.4127	80.0	837740.000	0.3221
3,3'-Dichlorobenzidine	15.0	217012.000	0.3621	25.0	443823.000	0.3919	80.0	2229301.00	0.4259
3-Nitroaniline	15.0	89260.0000	0.2874	25.0	178886.000	0.3071	80.0	945233.000	0.3634
4-Bromophenyl Phenyl Ether	15.0	139924.000	0.2823	25.0	278161.000	0.3016	80.0	1301737.00	0.3120
4-Chlorophenyl Phenyl Ether	15.0	226715.000	0.7299	25.0	443754.000	0.7618	80.0	1978574.00	0.7607
4-Nitroaniline	15.0	94672.0000	0.3048	25.0	200187.000	0.3437	80.0	898796.000	0.3456
Benzo[a]anthracene	15.0	766043.000	1.278	25.0	1527410.00	1.349	80.0	6521408.00	1.246
Benzo[b]fluoranthene	15.0	772844.000	1.403	25.0	1632433.00	1.589	80.0	7331088.00	1.544
Benzo[k]fluoranthene	15.0	745652.000	1.354	25.0	1431418.00	1.394	80.0	6639483.00	1.399
Dibenz[ah]anthracene	15.0	662205.000	1.203	25.0	1360185.00	1.324	80.0	6490349.00	1.367
Hexachlorobenzene	15.0	148838.000	0.3003	25.0	299364.000	0.3246	80.0	1384081.00	0.3318
Indeno[1,2,3-cd]pyrene	15.0	767348.000	1.394	25.0	1568735.00	1.527	80.0	7459965.00	1.571
bis(2-Chloroethoxy)methane	15.0	226309.000	0.4127	25.0	423531.000	0.4214	80.0	1785615.00	0.4077
bis(2-Chloroethyl)ether	15.0	129519.000	0.9166	25.0	237258.000	0.9185	80.0	938584.000	0.8642
bis(2-Ethylhexyl)phthalate	15.0	482150.000	0.8045	25.0	951544.000	0.8402	80.0	3948863.00	0.7544

INITIAL CALIBRATION DATA

00063192

Login Number: L0705163 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 07-MAY-07 18:51

Column ID: F

Analyte	WG239693-08			WG239693-09		
	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	100	1282234.00	0.4277	120	1591556.00	0.4271
2-Nitrophenol	100	1100207.00	0.2156	120	1352688.00	0.2112
Benzo[a]pyrene	100	7196987.00	1.337	120	8671613.00	1.334
Hexachlorobutadiene	100	1041595.00	0.2041	120	1274900.00	0.1990
Pentachlorophenol	100	749487.000	0.1555	120	883475.000	0.1505
2,4-Dinitrophenol	100	591369.000	0.1973	120	768167.000	0.2061
4-Nitrophenol	100	633684.000	0.2114	120	866048.000	0.2324
Hexachlorocyclopentadiene	100	959957.000	0.3202	NA	NA	NA
n-Nitrosodipropylamine	100	1209267.00	0.9455	120	1457142.00	0.9311
2,4-Dinitrotoluene	100	1386410.00	0.4625	120	1671113.00	0.4485
2,6-Dinitrotoluene	100	1129039.00	0.3766	120	1396798.00	0.3748
2-Nitroaniline	100	979119.000	0.3266	120	1255549.00	0.3369
3,3'-Dichlorobenzidine	100	2544999.00	0.4257	120	3123340.00	0.4357
3-Nitroaniline	100	1101282.00	0.3674	120	1393199.00	0.3739
4-Bromophenyl Phenyl Ether	100	1493383.00	0.3099	120	1802964.00	0.3071
4-Chlorophenyl Phenyl Ether	100	2268744.00	0.7568	120	2748843.00	0.7377
4-Nitroaniline	100	1038346.00	0.3464	120	1293936.00	0.3472
Benzo[a]anthracene	100	7358461.00	1.231	120	8786201.00	1.226
Benzo[b]fluoranthene	100	8689879.00	1.615	120	10312130.0	1.587
Benzo[k]fluoranthene	100	7186176.00	1.335	120	8745087.00	1.346
Dibenz[ah]anthracene	100	7302018.00	1.357	120	8798909.00	1.354
Hexachlorobenzene	100	1562788.00	0.3243	120	1846516.00	0.3145
Indeno[1,2,3-cd]pyrene	100	8385135.00	1.558	120	10078473.0	1.551
bis(2-Chloroethoxy)methane	100	2064622.00	0.4045	120	2607502.00	0.4070
bis(2-Chloroethyl)ether	100	1094547.00	0.8558	120	1361765.00	0.8701
bis(2-Ethylhexyl)phthalate	100	4475514.00	0.7485	120	5357420.00	0.7474

KEMRON Environmental Services

INITIAL CALIBRATION DATA

00063193

Login Number: L0705163 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-07 20:22

Column ID: F

Analyte	WG240060-01			WG240060-02			WG240060-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Atrazine	50.0	407866.000	0.3129	3.00	13166.0000	0.2092	15.0	92322.0000	0.2888

KEMRON FORMS - Modified 10/13/2006
Version 1.6 PDF File ID: 765985
Report generated 05/14/2007 16:59

KEMRON Environmental Services

INITIAL CALIBRATION DATA

00063194

Login Number: L0705163 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-07 20:22

Column ID: F

Analyte	WG240060-04			WG240060-05			WG240060-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Atrazine	25.0	184994.000	0.3136	80.0	604576.000	0.3356	100	682590.000	0.3329

KEMRON FORMS - Modified 10/13/2006
Version 1.6 PDF File ID: 765985
Report generated 05/14/2007 16:59

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

00063195

Login Number: L0705163 Run Date: 05/07/2007 Sample ID: WG239693-10

Instrument ID: HPMS5 Run Time: 17:45 Method: 8270C

File ID: 5M46151 Analyst: ASP

ICal Workgroup: WG239693 Cal ID: HPMS5 - 07-MAY-07

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2-Nitrophenol	CCC	50000	57700	ug/L	0.239	15.3	30	
Hexachlorobutadiene	CCC	50000	62500	ug/L	0.252	25.0	30	
2,4,6-Trichlorophenol	CCC	50000	58500	ug/L	0.451	17.0	30	
Pentachlorophenol	CCC	50000	50100	ug/L	0.138	0.200	40	
Benzo[a]pyrene	CCC	50000	54100	ug/L	1.41	8.30	30	
n-Nitrosodipropylamine	SPCC	50000	51800	ug/L	1.04	3.60	30	
2,4-Dinitrophenol	SPCC	50000	55600	ug/L	0.192	11.2	40	
Hexachlorocyclopentadiene	SPCC	50000	60000	ug/L	0.372	20.1	40	
4-Nitrophenol	SPCC	50000	49300	ug/L	0.172	1.40	40	
bis(2-Chloroethyl)ether		50000	51000	ug/L	0.926	1.90	30	
bis(2-Chloroethoxy)methane		50000	55000	ug/L	0.454	10.1	30	
2-Nitroaniline		50000	44300	ug/L	0.318	11.4	40	
2,6-Dinitrotoluene		50000	55500	ug/L	0.404	10.9	30	
3-Nitroaniline		50000	38600	ug/L	0.262	22.9	40	
2,4-Dinitrotoluene		50000	60400	ug/L	0.541	20.8	30	
4-Chlorophenyl Phenyl Ether		50000	54400	ug/L	0.811	8.80	30	
4-Nitroaniline		50000	38400	ug/L	0.264	23.1	40	
4-Bromophenyl Phenyl Ether		50000	48800	ug/L	0.292	2.40	30	
Hexachlorobenzene		50000	58200	ug/L	0.369	16.5	30	
3,3'-Dichlorobenzidine		50000	35500	ug/L	0.285	29.1	40	
Benzo[a]anthracene		50000	52500	ug/L	1.34	5.00	30	
bis(2-Ethylhexyl)phthalate		50000	54100	ug/L	0.859	8.10	30	
Benzo[b]fluoranthene		50000	52000	ug/L	1.58	4.10	30	
Benzo[k]fluoranthene		50000	54400	ug/L	1.49	8.80	30	
Indeno[1,2,3-cd]pyrene		50000	54900	ug/L	1.62	9.80	30	
Dibenz[ah]anthracene		50000	54800	ug/L	1.40	9.70	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 03/21/2007 - (ALT)
Version 1.5 PDF File ID: 765986
Report generated 05/14/2007 16:59

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

00063196

Login Number: L0705163 Run Date: 05/07/2007 Sample ID: WG239693-11

Instrument ID: HPMS5 Run Time: 18:18 Method: 8270C

File ID: 5M46152 Analyst: ASP

ICal Workgroup: WG239693 Cal ID: HPMS5 - 07-MAY-07

Analyte		Expected	Found	Units	RF	%D	UCL	Q
3,3'-Dichlorobenzidine		50000	50800	ug/L	0.409	1.70	40	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 03/21/2007 - (ALT)
Version 1.5 PDF File ID: 765986
Report generated 05/14/2007 16:59

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

00063197

Login Number: L0705163 Run Date: 05/10/2007 Sample ID: WG240060-07

Instrument ID: HPMS5 Run Time: 20:55 Method: 8270C

File ID: 5M46238 Analyst: ASP

ICal Workgroup: WG240060 Cal ID: HPMS5 - 10-MAY-07

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Atrazine		50000	47100	ug/L	0.306	5.80	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 03/21/2007 - (ALT)
Version 1.5 PDF File ID: 765986
Report generated 05/14/2007 16:59

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063198

Login Number: L0705163 Run Date: 05/11/2007 Sample ID: WG240135-02
Instrument ID: HPMS5 Run Time: 12:43 Method: 8270C
File ID: 5M46248 Analyst: ASP
Workgroup (AAB#): WG240262 Cal ID: HPMS5 - 07-MAY-07

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2-Nitrophenol	CCC	50000	53400	ug/L	0.221	6.70	20	
Hexachlorobutadiene	CCC	50000	56000	ug/L	0.226	12.1	20	
2,4,6-Trichlorophenol	CCC	50000	55400	ug/L	0.427	10.8	20	
Pentachlorophenol	CCC	50000	46100	ug/L	0.125	7.75	20	
Benzo[a]pyrene	CCC	50000	51600	ug/L	1.34	3.12	20	
Di-n-Octyl Phthalate	CCC	50000	53900	ug/L	1.58	7.83	20	
2,4-Dichlorophenol	CCC	50000	54700	ug/L	0.333	9.32	20	
1,4-Dichlorobenzene	CCC	50000	51200	ug/L	1.77	2.43	20	
n-Nitrosodiphenylamine	CCC	50000	50800	ug/L	0.845	1.51	20	
Phenol	CCC	50000	55100	ug/L	1.80	10.3	20	
4-Chloro-3-Methylphenol	CCC	50000	55900	ug/L	0.356	11.7	20	
Acenaphthene	CCC	50000	53900	ug/L	1.38	7.86	20	
Fluoranthene	CCC	50000	54200	ug/L	1.56	8.32	20	
n-Nitrosodipropylamine	SPCC	50000	60500	ug/L	1.21	21.0	40	
4-Nitrophenol	SPCC	50000	54000	ug/L	0.193	7.90	40	
Hexachlorocyclopentadiene	SPCC	50000	47200	ug/L	0.287	5.68	40	
2,4-Dinitrophenol	SPCC	50000	44600	ug/L	0.142	10.8	40	
bis(2-Chloroethyl)ether		50000	58400	ug/L	1.06	16.8	40	
bis(2-Chloroethoxy)methane		50000	56500	ug/L	0.466	13.0	40	
2-Nitroaniline		50000	54100	ug/L	0.389	8.29	40	
2,6-Dinitrotoluene		50000	51600	ug/L	0.375	3.13	40	
3-Nitroaniline		50000	42300	ug/L	0.288	15.3	40	
2,4-Dinitrotoluene		50000	55600	ug/L	0.499	11.3	40	
4-Chlorophenyl Phenyl Ether		50000	53200	ug/L	0.793	6.30	40	
4-Nitroaniline		50000	49800	ug/L	0.341	0.452	40	
4-Bromophenyl Phenyl Ether		50000	50200	ug/L	0.300	0.441	40	
Hexachlorobenzene		50000	50400	ug/L	0.320	0.861	40	
3,3'-Dichlorobenzidine		50000	44400	ug/L	0.357	11.3	40	
Benzo[a]anthracene		50000	51700	ug/L	1.32	3.33	40	
bis(2-Ethylhexyl)phthalate		50000	50700	ug/L	0.806	1.47	40	
Benzo[b]fluoranthene		50000	52700	ug/L	1.60	5.40	40	
Benzo[k]fluoranthene		50000	50900	ug/L	1.40	1.74	40	
Indeno[1,2,3-cd]pyrene		50000	48900	ug/L	1.44	2.21	40	
Dibenz[ah]anthracene		50000	49400	ug/L	1.26	1.25	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 765988
Report generated 05/14/2007 16:59

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

00063199

Login Number: L0705163 **CCV Number:** WG240135-02
Instrument ID: HPMS5 **CAL ID:** HPMS5-07-MAY-07
Workgroup (AAB#): WG240262 **Matrix:** WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG240135-02	NA	NA	246824	576580	1252769	970080	1092540	939327
Upper Limit	NA	NA	493648	1153160	2505538	1940160	2185080	1878654
Lower Limit	NA	NA	123412	288290	626385	485040	546270	469664
L0705163-01	1.00	01	257154	553760	1117028	943198	916961	859789
L0705163-02	1.00	01	252076	550509	1115281	923625	923384	854122
L0705163-03	1.00	01	260363	567358	1146877	960306	948104	887406
L0705163-08	1.00	01	252081	544955	1114981	934113	922828	859569
L0705163-09	1.00	01	239150	518850	1034298	887858	842178	806259
WG240111-01	1.00	01	274524	594582	1222837	1008194	1014779	924622
WG240111-02	1.00	01	267714	603104	1384550	1120303	1159108	984503
WG240111-03	1.00	01	280928	617862	1385815	1147589	1174124	1007448

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 02/20/2007
Version 1.3 PDF File ID: 765883
Report generated 05/14/2007 16:59

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

00063200

Login Number: L0705163 **CCV Number:** WG240135-02
Instrument ID: HPMS5 **CAL ID:** HPMS5-07-MAY-07
Workgroup (AAB#): WG240262 **Matrix:** WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG240135-02	NA	NA	9.09	12.79	17.23	10.69	19.57	14.42
Upper Limit	NA	NA	9.59	13.29	17.73	11.19	20.07	14.92
Lower Limit	NA	NA	8.59	12.29	16.73	10.19	19.07	13.92
L0705163-01	1.00	01	9.09	12.79	17.23	10.69	19.57	14.42
L0705163-02	1.00	01	9.09	12.79	17.23	10.69	19.57	14.42
L0705163-03	1.00	01	9.09	12.79	17.23	10.69	19.56	14.42
L0705163-08	1.00	01	9.09	12.79	17.23	10.68	19.56	14.42
L0705163-09	1.00	01	9.09	12.79	17.23	10.69	19.57	14.42
WG240111-01	1.00	01	9.09	12.79	17.23	10.69	19.57	14.42
WG240111-02	1.00	01	9.09	12.79	17.23	10.69	19.57	14.42
WG240111-03	1.00	01	9.09	12.79	17.23	10.69	19.57	14.42

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 02/20/2007
Version 1.3 PDF File ID: 765989
Report generated 05/14/2007 16:59

2.1.2 PCB GC Data (8082)

2.1.2.1 Summary Data

KEMRON Login No.: L0705163

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)

Analysis: SW-846 8082

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Surrogates: All acceptance criteria were met.

Samples: All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must

correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.

This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.

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

Reason #4: System Establishes Incorrect Baseline

There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous

Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

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

Analyst: ECL

Approved: 15-MAY-07

LABORATORY REPORT

L0705163

00063205

05/18/07 15:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Biulding
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Diane Mever

Account Number: 2773
Work ID: LHAAP

P.O. Number: 200328

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
1004SS007-SPLP	L0705163-07	8082	1	05-MAY-07
64SB03-01-SPLP	L0705163-09	8082	1	05-MAY-07

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063206

Sample Number: **L0705163-07**
Client ID: **1004SS007-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240216**
Collect Date: **05/04/2007 13:17**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **05/11/2007 13:00**
Cal Date: **03/01/2007 13:56**
Run Date: **05/14/2007 11:44**
File ID: **9GR39371.R**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	60.6	30	132	
Decachlorobiphenyl	36.3	36	144	

U Not detected at or above adjusted sample detection limit

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063207

Sample Number: **L0705163-09**
Client ID: **64SB03-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240216**
Collect Date: **05/04/2007 14:50**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **05/11/2007 13:00**
Cal Date: **03/01/2007 13:56**
Run Date: **05/14/2007 12:02**
File ID: **9GR39372.R**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	72.3	30	132	
Decachlorobiphenyl	54.3	36	144	

U Not detected at or above adjusted sample detection limit

2.1.2.2 QC Summary Data

Example 8082 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = \frac{As}{Cs}$$

where:	Example:
A_s = Area of the compound being measured in the standard	10000
C_s = Concentration of the compound being measured (ng/mL)	100
	RF = 100

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:*

$$C = \frac{(A_x)(Vf)(D)}{(RF)(Vi)}$$

where:	Example:
A_x = Area of the compound begin measured	10000
Vf = Final volume of sample extract (mL). (prep log)	1
D = Dilution factor for sample as a multiplier (10X=10)	1
RF = Response factor from ICAL calculated above.	100
Vi = Initial volume of sample (mL). (prep log)	1000
	C(ug/L) = 0.1

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report:*

$$C = \frac{(A_x)(Vf)(D)}{(RF)(Wi)}$$

where:	Example:
A_x = Area of the compound begin measured	10000
Vf = Final volume of sample extract (mL). (prep log)	1
D = Dilution factor for sample as a multiplier (10X=10)	1
RF = Response factor from ICAL calculated above.	100
Wi = Initial weight of sample (g).	30
	C(ug/kg) = 3.333333

* Concentrations appearing on instrument quantitation reports are on-column results and do not take into account initial volume, final volume and dilution factor.

R1204404

Sample Extract Log Sheet

Parameter: PCB H_2O SOP #: EXP01 Revision #: 12
Extraction Analyst(s): CPD TV/KD Analyst(s): CPD
Date/Time Extracted: 5/11/07/1300 Date TV/KD: 5-11-07
Spike/Surrogate Analyst: CPD Witness: CSH
Surrogate #: STD18893 Earliest Hold Date: 5/15
Spike #: A = STD17061 Spike #: B = —

Extraction Work Group WG 240128
Extract Relinquished By: CSH
Extract Received By & Date: CAM 5/14/07

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank					1000mL	200µL		10mL	T				WG 240128-01
2	LCS					1		100µL						WG -02
3	LCSDup					1		1						WG -03
4	05-210-01	8082				980mL								
5	05-245-07	1				1000mL								
6	05-271-09					940mL								
7	-10					1000mL								
8	SPLP BLK 5/9	8082-SPLP				980mL								
9	05-163-07	1				1000mL								
10	-09					1								
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CPD 5-11-07

Methylene Chloride Lot #: E02E45
Hexane Lot #: C32E31
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: 9936 Lot #: R6T11433
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: H_2SO_4 Lot #: B15071
Florisil Lot #: C45565
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: C0A12125

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B	✓	GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A	✓	N/A	
Sulfur 3660B			

Peer Reviewed By: Chris Kell Date: 5-11-7

Extraction Notes For Volume # 279 Page # 175

General Comments: None

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: None

Supervisor Review: _____ Date: _____

KEMRON ENVIRONMENTAL SERVICES

TCLP Non-Volatile

Analyst(s): Rac
Date: 05-09-07

Analyst/Date		Analyst/Date	
Rac 5-09-07		Rac 5-10-07	
Time On	Temp On °C	Time Off	Temp Off °C
1600	23	0800	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
G 21	05-163-01	ME 8270	1312	SFR-173	S/S	100		✓	100.03	2000
G 14	02	〃	〃	〃	〃	〃		〃	100.04	〃
G 22	03	〃	〃	〃	〃	〃		〃	100.00	〃
D	04	ME	〃	〃	〃	〃		〃	100.00	〃
D	05	〃	〃	〃	〃	〃		〃	100.02	〃
D	06	〃	〃	〃	〃	〃		〃	100.01	〃
G-3	07	8082	〃	〃	〃	〃		〃	100.05	〃
G-9	08	8270	〃	〃	〃	〃		〃	100.04	〃
G-29	09	〃 8082	〃	〃	〃	〃		〃	100.00	〃
N/A	FBLK	ME 〃 〃	〃	〃	N/A	N/A		〃	2000	〃

Rac 5-09-07

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

KEMRON Environmental Services

Instrument Run Log

00063213

Instrument: HP9 Dataset: 030107.SEC

Analyst1: ECL Analyst2: NA

Method: 8082 SOP: GCS10 Rev: 9

Maintenance Log ID:

Column 1 ID: Column 2 ID: RTX-CLP2

Workgroups:

Internal STD: NA Surrogate STD: STD16580 Calibration STD STD16634

Comments: PCB MDL'S (1016, 1260, 1254, 1248)

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	9GR37622	WG234398-01 1660 ICAL 2000 PPB	1	1	STD16634	03/01/07 12:26
2	9GR37623	WG234398-02 1660 ICAL 1000 PPB	1	1	STD16634	03/01/07 12:44
3	9GR37624	WG234398-03 1660 ICAL 500 PPB	1	1	STD16634	03/01/07 13:02
4	9GR37625	WG234398-04 1660 ICAL 250 PPB	1	1	STD16634	03/01/07 13:20
5	9GR37626	WG234398-05 1660 ICAL 100 PPB	1	1	STD16634	03/01/07 13:38
6	9GR37627	WG234398-06 1660 ICAL 50 PPB	1	1	STD16634	03/01/07 13:56
7	9GR37628	WG234398-07 1660 ALT 250 PPB	1	1	STD16635	03/01/07 14:14
8	9GR37629	1254 500 PPB	1	1	STD16637	03/01/07 14:32
9	9GR37630	1254 ALT 500 PPB	1	1	STD16638	03/01/07 14:50
10	9GR37631	1248 500 PPB	1	1	STD16639	03/01/07 15:08
11	9GR37632	1248 ALT 500 PPB	1	1	STD17927	03/01/07 15:26
12	9GR37633	1242 500 PPB	1	1	STD16640	03/01/07 15:44
13	9GR37634	1242 ALT 500 PPB	1	1	STD16641	03/01/07 16:02
14	9GR37635	1232 500 PPB	1	1	STD17923	03/01/07 16:20
15	9GR37636	1232 ALT 500 PPB	1	1	STD17926	03/01/07 16:38
16	9GR37637	1221 500 PPB	1	1	STD17957	03/01/07 16:56
17	9GR37638	1221 ALT 500 PPB	1	1	STD16642	03/01/07 17:14
18	9GR37639	WG234401-04 1660 CCV 250 PPB	1	1	STD16634	03/01/07 17:32
19	9GR37640	BLANK V273 P123	1	1		03/01/07 17:50
20	9GR37641	L0701048-01	1	1		03/01/07 18:08
21	9GR37642	L0701048-02	1	1		03/01/07 18:26
22	9GR37643	L0701048-03	1	1		03/01/07 18:44
23	9GR37644	L0701048-04	1	1		03/01/07 19:02
24	9GR37645	L0701048-05	1	1		03/01/07 19:20
25	9GR37646	L0701048-06	1	1		03/01/07 19:38
26	9GR37647	L0701048-07	1	1		03/01/07 19:56
27	9GR37648	WG234401-05 1660 CCV 500 PPB	1	1	STD16634	03/01/07 20:14
28	9GR37649	BLANK V272 P157	7	1	SOIL	03/01/07 20:32
29	9GR37650	L0701048-08	7	1	SOIL	03/01/07 20:50
30	9GR37651	L0701048-09	7	1	SOIL	03/01/07 21:08
31	9GR37652	L0701048-10	7	1	SOIL	03/01/07 21:26
32	9GR37653	L0701048-11	7	1	SOIL	03/01/07 21:44
33	9GR37654	L0701048-12	7	1	SOIL	03/01/07 22:02
34	9GR37655	L0701048-13	7	1	SOIL	03/01/07 22:20
35	9GR37656	L0701048-14	7	1	SOIL	03/01/07 22:38

Approved: 05-MAR-07

KEMRON Environmental Services

Instrument Run Log

00063214

Instrument: HP9 Dataset: 030107.SEC

Analyst1: ECL Analyst2: NA

Method: 8082 SOP: GCS10 Rev: 9

Maintenance Log ID:

Column 1 ID: Column 2 ID: RTX-CLP2

Workgroups:

Internal STD: NA Surrogate STD: STD16580 STD16634

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
36	9GR37657	WG234401-06 1660 CCV 250 PPB	1	1	STD16634	03/01/07 22:56
37	9GR37658	1254 CCV 500 PPB	1	1	STD16637	03/01/07 23:14
38	9GR37659	BLANK V273 P107	1	1		03/01/07 23:32
39	9GR37660	L0701047-01	1	1		03/01/07 23:50
40	9GR37661	L0701047-02	1	1		03/02/07 00:08
41	9GR37662	L0701047-03	1	1		03/02/07 00:26
42	9GR37663	L0701047-04	1	1		03/02/07 00:44
43	9GR37664	L0701047-05	1	1		03/02/07 01:02
44	9GR37665	L0701047-06	1	1		03/02/07 01:20
45	9GR37666	L0701047-07	1	1		03/02/07 01:38
46	9GR37667	1254 CCV 500 PPB	1	1	STD16637	03/02/07 01:56
47	9GR37668	BLANK V22 P145	7	1	SOIL	03/02/07 02:14
48	9GR37669	L0701047-08	7	1	SOIL	03/02/07 02:32
49	9GR37670	L0701047-09	7	1	SOIL	03/02/07 02:50
50	9GR37671	L0701047-10	7	1	SOIL	03/02/07 03:08
51	9GR37672	L0701047-11	7	1	SOIL	03/02/07 03:26
52	9GR37673	L0701047-12	7	1	SOIL	03/02/07 03:44
53	9GR37674	L0701047-13	7	1	SOIL	03/02/07 04:02
54	9GR37675	L0701047-14	7	1	SOIL	03/02/07 04:20
55	9GR37676	1254 CCV 500 PPB	1	1	STD16637	03/02/07 04:38
56	9GR37677	1248 CCV 500 PPB	1	1	STD16639	03/02/07 04:56
57	9GR37678	L0701046-01	1	1		03/02/07 05:14
58	9GR37679	L0701046-02	1	1		03/02/07 05:32
59	9GR37680	L0701046-03	1	1		03/02/07 05:50
60	9GR37681	L0701046-04	1	1		03/02/07 06:08
61	9GR37682	L0701046-05	1	1		03/02/07 06:26
62	9GR37683	L0701046-06	1	1		03/02/07 06:44
63	9GR37684	L0701046-07	1	1		03/02/07 07:02
64	9GR37685	1248 CCV 500 PPB	1	1	STD16639	03/02/07 07:20
65	9GR37686	L0701046-08	7	1	SOIL	03/02/07 07:38
66	9GR37687	L0701046-09	7	1	SOIL	03/02/07 07:55
67	9GR37688	L0701046-10	7	1	SOIL	03/02/07 08:14
68	9GR37689	L0701046-11	7	1	SOIL	03/02/07 08:32
69	9GR37690	L0701046-12	7	1	SOIL	03/02/07 08:50
70	9GR37691	L0701046-13	7	1	SOIL	03/02/07 09:08
71	9GR37692	L0701046-14	7	1	SOIL	03/02/07 09:26
72	9GR37693	1248 CCV 500 PPB	1	1	STD16639	03/02/07 09:44

Approved: 05-MAR-07

KEMRON Environmental Services

Instrument Run Log

00063215

Instrument: HP9 Dataset: 030107.SEC

Analyst1: ECL Analyst2: NA

Method: 8082 SOP: GCS10 Rev: 9

Maintenance Log ID:

Column 1 ID: Column 2 ID: RTX-CLP2

Workgroups:

Internal STD: NA Surrogate STD: STD16580 STD16634

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Approved: 05-MAR-07

KEMRON Environmental Services

Instrument Run Log

00063216

Instrument: HP9 Dataset: 040407

Analyst1: ECL Analyst2: NA

Method: 8151 SOP: GCS04 Rev: 8

Maintenance Log ID:

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal STD: NA Surrogate STD: STD17525 Calibration STD

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	9G38375.F	HERB CCV	1	1		04/04/07 11:36
2	9G38375.R	HERB CCV	1	1		04/04/07 12:03
3	9G38376.F	WG237013-01 HERB ICAL \#5	1	1	STD18593	04/04/07 13:50
4	9G38376.R	WG237013-01 HERB ICAL \#5	1	1	STD18593	04/04/07 14:17
5	9G38377.F	WG237013-02 HERB ICAL \#4	1	1	STD18593	04/04/07 14:17
6	9G38377.R	WG237013-02 HERB ICAL \#4	1	1	STD18593	04/04/07 14:44
7	9G38378.F	WG237013-03 HERB ICAL \#3	1	1	STD18593	04/04/07 14:44
8	9G38378.R	WG237013-03 HERB ICAL \#3	1	1	STD18593	04/04/07 15:11
9	9G38379.F	WG237013-04 HERB ICAL \#2	1	1	STD18593	04/04/07 15:11
10	9G38379.R	WG237013-04 HERB ICAL \#2	1	1	STD18593	04/04/07 15:38
11	9G38380.F	WG237013-05 HERB ICAL \#1	1	1	STD18593	04/04/07 15:38
12	9G38380.R	WG237013-05 HERB ICAL \#1	1	1	STD18593	04/04/07 16:05
13	9G38381.F	WG237013-06 HERB ALT	1	1	STD18594	04/04/07 16:05
14	9G38381.R	WG237013-06 HERB ALT	1	1	STD18594	04/04/07 16:32
15	9G38382.F	WG236836-01 BLANK V277 P145	1	1		04/04/07 16:32
16	9G38382.R	WG236836-01 BLANK V277 P145	1	1		04/04/07 16:59
17	9G38383.F	WG236836-02 LCS V277 P145	1	1		04/04/07 16:59
18	9G38383.R	WG236836-02 LCS V277 P145	1	1		04/04/07 17:26
19	9G38384.F	WG236836-03 LCS DUP V277 P145	1	1		04/04/07 17:26
20	9G38384.R	WG236836-03 LCS DUP V277 P145	1	1		04/04/07 17:53
21	9G38385.F	L0703678-01	1	1		04/04/07 17:53
22	9G38385.R	L0703678-01	1	1		04/04/07 18:20
23	9G38386.F	LCS CHECK V277 P145	1	1		04/04/07 18:20
24	9G38386.R	LCS CHECK V277 P145	1	1		04/05/07 08:07
25	9G38387.F	WG237015-01 HERB CCV	1	1	STD18593	04/05/07 08:07
26	9G38387.R	WG237015-01 HERB CCV	1	1	STD18593	04/05/07 08:33

Comments

Seq.	Rerun	Dil.	Reason	Analytes
25				
	WG237015-01 HERB CCV: 2,4-DB failed high on the front column.			

Page: 1 of 1

Approved: 05-APR-07

KEMRON Environmental Services

Instrument Run Log

00063217

Instrument: HP9 Dataset: 051407

Analyst1: ECL Analyst2: NA

Method: 8082 SOP: GCS10 Rev: 9

Maintenance Log ID:

Column 1 ID: Column 2 ID: RTX-CLP2

Workgroups: WG240216, WG240247, WG240132, WG240133, WG240134

Internal STD: NA Surrogate STD: STD18893 Calibration STD

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	9GR39367.R	WG240234-01 1660 CCV 250 PPB	1	1	STD16634	05/14/07 10:03
2	9GR39368.R	WG240128-01 BLANK V279 P175	1	1		05/14/07 10:51
3	9GR39369.R	WG240128-02 LCS V279 P175	1	1		05/14/07 11:09
4	9GR39370.R	WG240128-03 LCS DUP V279 P175	1	1		05/14/07 11:26
5	9GR39371.R	L0705163-07	18	1		05/14/07 11:44
6	9GR39372.R	L0705163-09	18	1		05/14/07 12:02
7	9GR39373.R	L0705210-01	1	1		05/14/07 12:19
8	9GR39374.R	L0705245-07	1	1		05/14/07 12:37
9	9GR39375.R	L0705271-09	1	1		05/14/07 12:55
10	9GR39376.R	L0705271-10	1	1		05/14/07 13:12
11	9GR39377.R	WG239967-01 SPLP BLANK 5/9	18	1		05/14/07 13:30
12	9GR39378.R	WG240234-02 1660 CCV 500 PPB	1	1	STD16634	05/14/07 13:48
13	9GR39379.R	WG240082-01 BLANK V279 P167	1	1		05/14/07 14:05
14	9GR39380.R	WG240082-02 LCS V279 P167	1	1		05/14/07 14:23
15	9GR39381.R	WG240082-03 LCS DUP V279 P167	1	1		05/14/07 14:41
16	9GR39382.R	L0705235-39	1	1		05/14/07 14:58
17	9GR39383.R	L0705203-01 10000x	7	10000	SOIL	05/14/07 15:16
18	9GR39384.R	L0705203-02 10000x	7	10000	SOIL	05/14/07 15:34
19	9GR39385.R	L0705203-03 2000x	7	2000	SOIL	05/14/07 15:52
20	9GR39386.R	L0705203-04 500x	7	500	SOIL	05/14/07 16:09
21	9GR39387.R	L0705203-05 20x	7	20	SOIL	05/14/07 16:27
22	9GR39388.R	L0705203-07 50x	7	50	SOIL	05/14/07 16:45
23	9GR39389.R	WG240234-03 1660 CCV 250 PPB	1	1	STD16634	05/14/07 17:02
24	9GR39390.R	L0705203-08 100x	7	100	SOIL	05/14/07 17:20
25	9GR39391.R	L0705203-09 100000x	7	100000	SOIL	05/14/07 17:37
26	9GR39392.R	L0705203-13 5000x	7	5000	SOIL	05/14/07 17:55
27	9GR39393.R	L0705203-14 10x	7	10	SOIL	05/14/07 18:13
28	9GR39394.R	L0705203-15 10x	7	10	SOIL	05/14/07 18:30
29	9GR39395.R	L0705235-02 10x	7	10	SOIL	05/14/07 18:48
30	9GR39396.R	L0705235-03 10x	7	10	SOIL	05/14/07 19:06
31	9GR39397.R	L0705235-12 10x	7	10	SOIL	05/14/07 19:24
32	9GR39398.R	L0705235-13 10x	7	10	SOIL	05/14/07 19:41
33	9GR39399.R	L0705235-16 10x	7	10	SOIL	05/14/07 19:59
34	9GR39400.R	WG240234-04 1660 CCV 500 PPB	1	1	STD16634	05/14/07 20:16
35	9GR39401.R	L0705235-20 50x	7	50	SOIL	05/14/07 20:34

Approved: 15-MAY-07

KEMRON Environmental Services

Instrument Run Log

00063218

Instrument: HP9 Dataset: 051407

Analyst1: ECL Analyst2: NA

Method: 8082 SOP: GCS10 Rev: 9

Maintenance Log ID:

Column 1 ID: Column 2 ID: RTX-CLP2

Workgroups: WG240216, WG240247, WG240132, WG240133, WG240134

Internal STD: NA Surrogate STD: STD18893

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
36	9GR39402.R	L0705235-25 10x	7	10	SOIL	05/14/07 20:52
37	9GR39403.R	L0705235-26 20x	7	20	SOIL	05/14/07 21:09
38	9GR39404.R	L0705235-29 10x	7	10	SOIL	05/14/07 21:27
39	9GR39405.R	L0705235-30 10x	7	10	SOIL	05/14/07 21:45
40	9GR39406.R	L0705235-33 20x	7	20	SOIL	05/14/07 22:02
41	9GR39407.R	L0705235-35 10x	7	10	SOIL	05/14/07 22:20
42	9GR39408.R	WG239970-02 BLANK V278 P169	7	1	SOIL	05/14/07 22:37
43	9GR39409.R	WG239970-03 LCS V278 P169	7	1	SOIL	05/14/07 22:55
44	9GR39410.R	WG240234-05 1660 CCV 250 PPB	1	1	STD16634	05/14/07 23:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes
9				
	L0705271-09: DCB surrogate failed low.			
10				
	L0705271-10: DCB surrogate failed low.			
29				
	L0705235-02 10x: DCB surrogate failed high.			
33				
	L0705235-16 10x: DCB surrogate failed high.			

Page: 2 of 2 Approved: 15-MAY-07

KEMRON Environmental Services
Data Checklist

00063219

Date: 01-MAR-2007
Analyst: ECL
Analyst: NA
Method: 8082
Instrument: HP9 REAR
Curve Workgroup: WG234398
Runlog ID: 14904
Analytical Workgroups: L0701046, L0701047, L0701048

System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	NA
Special Standards	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ECL
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the reasonableness of the results	X

Primary Reviewer:
02-MAR-2007

Secondary Reviewer:
05-MAR-2007

Generated: MAR-05-2007 13:06:20

KEMRON Environmental Services
Data Checklist

00063220

Date: 04-APR-2007
Analyst: ECL
Analyst: NA
Method: 8151
Instrument: HP9
Curve Workgroup: WG237013
Runlog ID: 15465
Analytical Workgroups: L0703678

System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	NA
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ECL
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
05-APR-2007

Secondary Reviewer:
05-APR-2007

Generated: APR-05-2007 12:38:35

KEMRON Environmental Services
Data Checklist

00063221

Date: 14-MAY-2007
Analyst: ECL
Analyst: NA
Method: 8082
Instrument: HP9
Curve Workgroup: NA
Runlog ID: 16148
Analytical Workgroups: L0705163, L0705210, L0705245, L0705271, L0705203, L0705235

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	
TCL hits	NA
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	X
Manual integrations	NA
Project/client specific requirements	NA
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
15-MAY-2007

Secondary Reviewer:
15-MAY-2007

Generated: MAY-15-2007 10:41:28

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

00063222

Analytical Method: 8082 **AAB#:** WG240216

Login Number: L0705163

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
1004SS007-SPLP	05/04/07	05/05/07	05/11/07	40	6.99	05/14/07	40	2.95	
64SB03-01-SPLP	05/04/07	05/05/07	05/11/07	40	6.92	05/14/07	40	2.96	

*** EXT = SEE PROJECT QAPP REQUIREMENTS**
***ANAL = SEE PROJECT QAPP REQUIREMENTS**

KEMRON FORMS - Modified 11/20/2006
Version 1.5 PDF File ID: 765398
Report generated 05/14/2007 12:23

SURROGATE STANDARDS

00063223

Login Number: L0705163
Instrument Id: HP9
Workgroup (AAB#): WG240216

Method: 8082
CAL ID: HP9-01-MAR-07
Matrix: Leachate

Sample Number	Dilution	Tag	1	2
L0705163-07	1.00	01	60.6	36.3
L0705163-09	1.00	01	72.3	54.3
WG240128-01	1.00	01	60.5	85.4
WG240128-02	1.00	01	63.4	84.7
WG240128-03	1.00	01	71.4	94.7

Surrogates	Surrogate Limits		
1 - 2,4,5,6-Tetrachloro-m-xylene	30	-	132
2 - Decachlorobiphenyl	36	-	144

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 09/27/2006
Version 1.5 PDF File ID: 765405
Report generated 05/15/2007 09:29

KEMRON Environmental Services

METHOD BLANK SUMMARY 00063224

Login Number: L0705163 Work Group: WG240216
Blank File ID: 9GR39368.R Blank Sample ID: WG240128-01
Prep Date: 05/11/07 13:00 Instrument ID: HP9
Analyzed Date: 05/14/07 10:51 Method: 8082
Analyst: ECL

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG240128-02	9GR39369.R	05/14/07 11:09	01
LCS2	WG240128-03	9GR39370.R	05/14/07 11:26	01
1004SS007-SPLP	L0705163-07	9GR39371.R	05/14/07 11:44	01
64SB03-01-SPLP	L0705163-09	9GR39372.R	05/14/07 12:02	01

KEMRON FORMS - Modified 01/31/2007
Version 1.5 PDF File ID: 765399
Report generated 05/14/2007 13:37

KEMRON Environmental Services

METHOD BLANK REPORT

00063225

Login Number: L0705163 Prep Date: 05/11/07 13:00 Sample ID: WG240128-01
Instrument ID: HP9 Run Date: 05/14/07 10:51 Prep Method: 3510C
File ID: 9GR39368.R Analyst: ECL Method: 8082
Workgroup (AAB#): WG240216 Matrix: Leachate Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HP9-01-MAR-07

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Aroclor-1016	0.250	0.500	0.250	1	U
Aroclor-1221	0.250	0.500	0.250	1	U
Aroclor-1232	0.250	0.500	0.250	1	U
Aroclor-1242	0.250	0.500	0.250	1	U
Aroclor-1248	0.250	0.500	0.250	1	U
Aroclor-1254	0.250	0.500	0.250	1	U
Aroclor-1260	0.250	0.500	0.250	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	60.5	30 - 132	PASS
Decachlorobiphenyl	85.4	36 - 144	PASS

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

KEMRON FORMS - Modified 12/07/2006
Version 1.5 PDF File ID: 765400
Report generated 05/14/2007 12:23

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

00063226

Login Number: L0705163 Analyst: ECL Prep Method: 3510C
Instrument ID: HP9 Matrix: Leachate Method: 8082
Workgroup (AAB#): WG240216 Units: ug/L
Sample ID: WG240128-02 LCS File ID: 9GR39369.R Run Date: 05/14/2007 11:09
Sample ID: WG240128-03 LCS2 File ID: 9GR39370.R Run Date: 05/14/2007 11:26

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Aroclor-1016	2.50	2.22	88.9	2.50	2.58	103	15.1	40 - 140	40	
Aroclor-1260	2.50	2.60	104	2.50	2.84	114	8.81	40 - 140	40	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4,5,6-Tetrachloro-m-xylene	63.4	71.4	30 - 132	PASS
Decachlorobiphenyl	84.7	94.7	36 - 144	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 02/08/2007
Version 1.5 PDF File ID: 765401
Report generated 05/14/2007 12:23

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

00063227

Login Number: L0705163 **Instrument ID:** HP9

Analytical Method: 8082 **Initial Calibration Date:** 01-MAR-07 13:56

ICAL Workgroup: WG234398 **Column ID:** R

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD(R^2)
Aroclor-1016-1		85930	11.9		
Aroclor-1016-2		184400	14.0		
Aroclor-1016-3		358700	8.19		
Aroclor-1016-4		155200	11.8		
Aroclor-1016-5		114600	12.4		
Aroclor-1260-1		220900	13.3		
Aroclor-1260-2		245300	13.4		
Aroclor-1260-3		327600	8.09		
Aroclor-1260-4		329400	9.65		
Aroclor-1260-5		81800	11.8		

R = Correlation coefficient; 0.995 minimum

R^2 = Coefficient of determination; 0.99 minimum

KEMRON FORMS - Modified 01/18/2007
Version 1.5 PDF File ID: 765402
Report generated 05/14/2007 12:23

KEMRON Environmental Services

INITIAL CALIBRATION DATA

00063228

Login Number: L0705163 **Instrument ID:** HP9

Analytical Method: 8082 **Initial Calibration Date:** 01-MAR-07 13:56

Column ID: R

Analyte	WG234398-01			WG234398-02			WG234398-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Aroclor-1016-1	2000	143892472	71950	1000	76263817.0	76260	500	42252342.0	84500
Aroclor-1016-2	2000	307843008	153900	1000	158094166	158100	500	89701609.0	179400
Aroclor-1016-3	2000	658370597	329200	1000	325783030	325800	500	174837599	349700
Aroclor-1016-4	2000	267959549	134000	1000	136609962	136600	500	75008046.0	150000
Aroclor-1016-5	2000	198897884	99450	1000	100458534	100500	500	55013191.0	110000
Aroclor-1260-1	2000	384114470	192100	1000	191801944	191800	500	104985705	210000
Aroclor-1260-2	2000	428877094	214400	1000	214120975	214100	500	115691454	231400
Aroclor-1260-3	2000	605905103	303000	1000	297308415	297300	500	159723170	319400
Aroclor-1260-4	2000	617853505	308900	1000	299656801	299700	500	158370212	316700
Aroclor-1260-5	2000	141632056	70820	1000	72261216.0	72260	500	39661264.0	79320

KEMRON Environmental Services

INITIAL CALIBRATION DATA

00063229

Login Number: L0705163 **Instrument ID:** HP9

Analytical Method: 8082 **Initial Calibration Date:** 01-MAR-07 13:56

Column ID: R

Analyte	WG234398-04			WG234398-05			WG234398-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Aroclor-1016-1	250	22636404.0	90550	100	9486796.00	94870	50.0	4872936.00	97460
Aroclor-1016-2	250	47598120.0	190400	100	20567178.0	205700	50.0	10957547.0	219200
Aroclor-1016-3	250	90649592.0	362600	100	39096222.0	391000	50.0	19685188.0	393700
Aroclor-1016-4	250	39823689.0	159300	100	17590542.0	175900	50.0	8757048.00	175100
Aroclor-1016-5	250	28873710.0	115500	100	12830647.0	128300	50.0	6698812.00	134000
Aroclor-1260-1	250	55235376.0	220900	100	24617008.0	246200	50.0	13213952.0	264300
Aroclor-1260-2	250	61111179.0	244400	100	27100309.0	271000	50.0	14811905.0	296200
Aroclor-1260-3	250	82866309.0	331500	100	36566114.0	365700	50.0	17445028.0	348900
Aroclor-1260-4	250	81295862.0	325200	100	33717334.0	337200	50.0	19433058.0	388700
Aroclor-1260-5	250	20648332.0	82590	100	9137592.00	91380	50.0	4721616.00	94430

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

00063230

Login Number: L0705163 Run Date: 03/01/2007 Sample ID: WG234398-07

Instrument ID: HP9 Run Time: 14:14 Method: 8082

File ID: 9GR37628.R Analyst: ECL

ICal Workgroup: WG234398 Cal ID: HP9 - 01-MAR-07

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Aroclor-1016		250	247	ug/L	175000	1.30	20	
Aroclor-1260		250	262	ug/L	246000	4.60	20	

* Exceeds %D Limit

KEMRON FORMS - Modified 03/21/2007 - (ALT)
Version 1.5 PDF File ID: 765403
Report generated 05/14/2007 12:23

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063231

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240234-01
Instrument ID: HP9 Run Time: 10:03 Method: 8082
File ID: 9GR39367.R Analyst: ECL
Workgroup (AAB#): WG240216 Cal ID: HP9 - 01-MAR-07

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Aroclor-1016		250	255	ug/L	184000	1.81	20	
Aroclor-1221		NA		ug/L			20	
Aroclor-1232		NA		ug/L			20	
Aroclor-1242		NA		ug/L			20	
Aroclor-1248		NA		ug/L			20	
Aroclor-1254		NA		ug/L			20	
Aroclor-1260		250	244	ug/L	235000	2.50	20	

* Exceeds %D Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 765404
Report generated 05/15/2007 11:02

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063232

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240234-02
Instrument ID: HP9 Run Time: 13:48 Method: 8082
File ID: 9GR39378.R Analyst: ECL
Workgroup (AAB#): WG240216 Cal ID: HP9 - 01-MAR-07

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Aroclor-1016		500	506	ug/L	184000	1.11	20	
Aroclor-1221		NA		ug/L			20	
Aroclor-1232		NA		ug/L			20	
Aroclor-1242		NA		ug/L			20	
Aroclor-1248		NA		ug/L			20	
Aroclor-1254		NA		ug/L			20	
Aroclor-1260		500	476	ug/L	229000	4.89	20	

* Exceeds %D Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 765404
Report generated 05/15/2007 11:02

2.2 Metals Data

2.2.1 Metals I C P Data

2.2.1.1 Summary Data

KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0705163

METHOD

Preparation: SW-846 3005A

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG240269(6010) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

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

Analyst: KHR

Approved: 18-MAY-07
Maren Berry

LABORATORY REPORT

L0705163

00063237

05/18/07 15:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Biulding
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Diane Mever

Account Number: 2773
Work ID: LHAAP

P.O. Number: 200328

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
55SB03-01-SPLP	L0705163-06	6010B	1	05-MAY-07

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063238

Sample Number: **L0705163-06**
Client ID: **55SB03-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240269**
Collect Date: **05/04/2007 12:40**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **05/11/2007 06:25**
Cal Date: **05/14/2007 14:16**
Run Date: **05/14/2007 15:33**
File ID: **P2.051407.153309**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Beryllium, Leachable	7440-41-7		U	0.00200	0.000500

U Not detected at or above adjusted sample detection limit

2.2.1.2 QC Summary Data

Example 6010 Calculations
Perkin Elmer Optima 3000 (PE-ICP)

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume	1
Vi = Initial volume	1
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ppm (mg/L)	0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume	50
Vi = Initial volume	1
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ppm (mg/L)	5

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	125
Px = Percent solids of sample (%wt)	80
$Cdry$ = Dry weight of sample (mg/kg)	156.25

12.5 ug/kg = 0.0125 mg/kg

Example 6010 Calculations
TJA - Iris

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume	1
Vi = Initial volume	1
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ppm (mg/L)	0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume	50
Vi = Initial volume	1
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ppm (mg/L)	5

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	125
Px = Percent solids of sample (%wt)	80
$Cdry$ = Dry weight of sample (mg/kg)	156.25

12.5 ug/kg = 0.0125 mg/kg

KEMRON ENVIRONMENTAL SERVICES

00063242

Metals Digest Log

Analyst(s): RCV
Date: 5/11/07
LCS: 5ml SRO 18729
MS/MSD: 5ml SRO 18729
Witness: NP
HNO_3 Lot #: COO 12160
1:1HNO_3: NP
HCl Lot #: COO 12186
H_2O_2 Lot #: NP
Earliest Sample Due Date: 5/17
Digest Tube Lot #: COO 12258
Hotblock #: 2
Hotblock Temp - Start: 95.1°C 0625
Hotblock Temp - End: 95.2°C 1025

Box: 81
Digestion Work Group: WG 240098

General Digestion
ME401 Revision # 12 - Method 3005A-Water
ME403 Revision # _____ - Method 3050B-Soil

Furnace Digestion
ME402 Revision # _____ - Method 3020A-Water
ME403 Revision # _____ - Method 3050B-Soil

AS/SE Digestion
ME410 Revision # _____ - Method 7060/7740-Water

Relinquished By: VC
Digest Received By: [illegible] Date: 5/11/07

	KEMRON #	Initial WT/Vol	Final Volume	Comments	Due Date
1	MBW	50ml	50ml	-02	
2	LCSW			-03	
3	SOLP MW 379			WG239969@1600	
4	05-163-06			1	5/18
5	05-256-01			Level 4 -01	5/17
6	-01MS			-04	
7	-01MSD			-05	
8	-02				
9	-03				
10	-05				
11	-06				
12	-07				
13	05-269-01				5/17
14	05-271-01			Level 4	5/21
15	-02				
16	-03				
17	-04				
18	-05				
19	-06				
20	-07				
21	-08				
22	-11				
23	-12				
24	-13				
25					
26		5/11/07			
27					
28					

Comments: _____

Primary Review: [signature] 5/11/07

Secondary Review: [signature] 5/11/07

KEMRON ENVIRONMENTAL SERVICES

TCLP Non-Volatile

Analyst(s): Rac
Date: 05-09-07

Analyst/Date		Analyst/Date	
Rac 5-09-07		Rac 5-10-07	
Time On	Temp On °C	Time Off	Temp Off °C
1600	23	0800	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
G 21	05-163-01	ME 8270	1312	SFR-173	S/S	100		✓	100.03	2000
G 14	02	"	"	"	"	"		"	100.04	"
G 22	03	"	"	"	"	"		"	100.00	"
D	04	ME	"	"	"	"		"	100.00	"
D	05	"	"	"	"	"		"	100.02	"
D	06	"	"	"	"	"		"	100.01	"
G-3	07	8082	"	"	"	"		"	100.05	"
G-9	08	8270	"	"	"	"		"	100.04	"
G-29	09	8082	"	"	"	"		"	100.00	"
N/A	FBLK	ME " "	"	"	N/A	N/A		"	2000	"

Rac 5-09-07

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

KEMRON Environmental Services

Instrument Run Log

00063244

Instrument: PE-ICP2 Dataset: 051407HR.CSV

Analyst1: KHR Analyst2: N/A

Method: 6010B SOP: ME600E Rev: 6

Maintenance Log ID: 19118

Calibration Std: STD19357 ICV/CCV Std: STD19064 Post Spike: STD18728

ICSA: STD19088 ICSAB: STD19114

Workgroups: 240269, 239929

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.051407.135243	WG240325-01	Calibration Point		1		05/14/07 13:52
2	P2.051407.135855	WG240325-02	Calibration Point		1		05/14/07 13:58
3	P2.051407.140508	WG240325-03	Calibration Point		1		05/14/07 14:05
4	P2.051407.141122	WG240325-04	Calibration Point		1		05/14/07 14:11
5	P2.051407.141642	WG240325-05	Calibration Point		1		05/14/07 14:16
6	P2.051407.142207	WG240325-06	Initial Calibration Verification		1		05/14/07 14:22
7	P2.051407.142725	WG240325-07	Initial Calib Blank		1		05/14/07 14:27
8	P2.051407.143337	WG240325-08	Interference Check		1		05/14/07 14:33
9	P2.051407.143854	WG240325-09	Interference Check		1		05/14/07 14:38
10	P2.051407.144411	WG240325-10	CCV		1		05/14/07 14:44
11	P2.051407.144933	WG240325-11	CCB		1		05/14/07 14:49
12	P2.051407.151525	WG240098-02	Method/Prep Blank	50/50	1		05/14/07 15:15
13	P2.051407.152139	WG240098-03	Laboratory Control S	50/50	1		05/14/07 15:21
14	P2.051407.152656	WG239969-01	Fluid Blank		1		05/14/07 15:26
15	P2.051407.153309	L0705163-06	55SB03-01-SPLP	50/50	1		05/14/07 15:33
16	P2.051407.153922	WG240098-01	Reference Sample		1		05/14/07 15:39
17	P2.051407.154536	WG240098-04	Matrix Spike	50/50	1		05/14/07 15:45
18	P2.051407.155054	WG240098-05	Matrix Spike Duplica	50/50	1		05/14/07 15:50
19	P2.051407.155616	L0705256-02	PZ-91-16	50/50	1		05/14/07 15:56
20	P2.051407.160234	WG240269-01	Post Digestion Spike		1	L0705256-02	05/14/07 16:02
21	P2.051407.160752	WG240269-02	Serial Dilution		5	L0705256-02	05/14/07 16:07
22	P2.051407.161406	WG240325-12	CCV		1		05/14/07 16:14
23	P2.051407.161924	WG240325-13	CCB		1		05/14/07 16:19
24	P2.051407.162536	L0705256-03	PZ-89-28	50/50	1		05/14/07 16:25
25	P2.051407.163054	L0705256-05	PZ-88-58	50/50	1		05/14/07 16:30
26	P2.051407.163715	L0705256-06	PZ-88-58-D	50/50	1		05/14/07 16:37
27	P2.051407.164329	L0705256-07	PZ-90-25	50/50	1		05/14/07 16:43
28	P2.051407.164847	L0705269-01	TEXIN Z07059	50/50	1		05/14/07 16:48
29	P2.051407.165404	L0705271-01	MW-9	50/50	1		05/14/07 16:54
30	P2.051407.170018	L0705271-02	MW-11	50/50	1		05/14/07 17:00
31	P2.051407.170632	L0705271-03	MW-36	50/50	1		05/14/07 17:06
32	P2.051407.171250	L0705271-04	MW-37	50/50	1		05/14/07 17:12
33	P2.051407.171904	WG240325-14	CCV		1		05/14/07 17:19
34	P2.051407.172422	WG240325-15	CCB		1		05/14/07 17:24
35	P2.051407.173034	L0705271-05	MW-37D	50/50	1		05/14/07 17:30
36	P2.051407.173648	L0705271-06	MW-1D	50/50	1		05/14/07 17:36
37	P2.051407.174302	L0705271-07	MW-1	50/50	1		05/14/07 17:43

Page: 1

Approved: May 15, 2007

KEMRON Environmental Services

Instrument Run Log

00063245

Instrument: PE-ICP2 Dataset: 051407HR.CSV

Analyst1: KHR Analyst2: N/A

Method: 6010B SOP: ME600E Rev: 6

Maintenance Log ID: 19118

Calibration Std: STD19357 ICV/CCV Std: STD19064 Post Spike: STD18728

ICSA: STD19088 ICSAB: STD19114

Workgroups: 240269, 239929

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	P2.051407.174917	L0705271-08	MW-1S	50/50	1		05/14/07 17:49
39	P2.051407.175532	L0705271-11	MW-34	50/50	1		05/14/07 17:55
40	P2.051407.180147	L0705271-12	MW-2D	50/50	1		05/14/07 18:01
41	P2.051407.180705	L0705271-13	MW-24	50/50	1		05/14/07 18:07
42	P2.051407.181223	WG240325-16	CCV		1		05/14/07 18:12
43	P2.051407.181741	WG240325-17	CCB		1		05/14/07 18:17
44	P2.051407.182353	WG239898-02	Reference Sample		5		05/14/07 18:23
45	P2.051407.182910	WG239898-07	Matrix Spike	50/50	5		05/14/07 18:29
46	P2.051407.183427	WG239898-08	Matrix Spike Duplica	50/50	5		05/14/07 18:34
47	P2.051407.183945	WG239929-01	Post Digestion Spike		5	L0705188-01	05/14/07 18:39
48	P2.051407.184503	WG240325-18	CCV		1		05/14/07 18:45
49	P2.051407.185021	WG240325-19	CCB		1		05/14/07 18:50

Approved: May 15, 2007

KEMRON Environmental Services
Data Checklist

00063246

Date: 14-MAY-2007
Analyst: KHR
Analyst: NA
Method: 6010B
Instrument: PE-ICP2
Curve Workgroup: 240325
Runlog ID: 16142
Analytical Workgroups: 240269, 239929

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	
Level 3	163
Level 4	188, 256, 271
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	KHR
Secondary Reviewer	LSB
Comments	

Primary Reviewer:
15-MAY-2007

Secondary Reviewer:
15-MAY-2007

Generated: MAY-15-2007 14:50:08

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

00063247

Analytical Method: 6010B AAB#: WG240269

Login Number: L0705163

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
55SB03-01-SPLP	05/04/07	05/05/07	05/11/07	180	6.74	05/14/07	180	3.38	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 11/20/2006
Version 1.5 PDF File ID: 766328
Report generated 05/15/2007 09:43

METHOD BLANK SUMMARY

00063248

Login Number: L0705163
Work Group: WG240269
Blank File ID: P2.051407.151525
Blank Sample ID: WG240098-02
Prep Date: 05/11/07 06:25
Instrument ID: PE-ICP2
Analyzed Date: 05/14/07 15:15
Method: 6010B
Analyst: KHR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG240098-03	P2.051407.152139	05/14/07 15:21	01
55SB03-01-SPLP	L0705163-06	P2.051407.153309	05/14/07 15:33	01

KEMRON FORMS - Modified 01/31/2007
Version 1.5 PDF File ID: 766329
Report generated 05/15/2007 09:43

KEMRON Environmental Services

METHOD BLANK REPORT

00063249

Login Number: L0705163 Prep Date: 05/11/07 06:25 Sample ID: WG240098-02
Instrument ID: PE-ICP2 Run Date: 05/14/07 15:15 Prep Method: 3005A
File ID: P2.051407.151525 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG240269 Matrix: Leachate Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: PE-ICP-14-MAY-07

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Beryllium, Leachable	0.000500	0.00200	0.000500	1	U

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

KEMRON FORMS - Modified 12/07/2006
Version 1.5 PDF File ID: 766330
Report generated 05/15/2007 09:44

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

00063250

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240098-03
Instrument ID: PE-ICP2 Run Time: 15:21 Prep Method: 3005A
File ID: P2.051407.152139 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG240269 Matrix: Leachate Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: PE-ICP-14-MAY-07

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Leachable	0.0250	0.0255	102	85 - 115	

KEMRON FORMS - Modified 12/15/2006
Version 1.5 PDF File ID: 766331
Report generated 05/15/2007 09:44

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

00063251

Loginnum:L0705163 Cal ID:PE-ICP2- Worknum:WG240269
Instrument ID:PE-ICP2 Contract #:DACA56-94-D-0020 Method:6010B
Parent ID:WG240098-01 File ID:P2.051407.153922 Dil:1 Matrix:WATER
Sample ID:WG240098-04 MS File ID:P2.051407.154536 Dil:1 Units:mg/L
Sample ID:WG240098-05 MSD File ID:P2.051407.155054 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Total	ND	0.0250	0.0252	101	0.0250	0.0254	102	0.830	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 12/08/2006
Version 1.5 PDF File ID: 766332
Report generated 05/15/2007 09:44

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

00063252

Sample Login ID: L0705163 **Worknum:** WG240269
Instrument ID: PE-ICP2 **Method:** 6010B
Sample ID: L0705256-02 **File ID:** P2.051407.155616 **Dil:** 1 **Units:** mg/L
Serial Dilution ID: WG240269-02 **File ID:** P2.051407.160752 **Dil:** 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Beryllium	0	U	0	U		

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 50 times the MDL
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 50 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 766326
Report generated 05/15/2007 10:01

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

00063253

Sample Login ID: L0705163 **Worknum:** WG240269
Instrument ID: PE-ICP2 **Method:** 6010B
Post Spike ID: WG240269-01 **File ID:** P2.051407.160234 **Dil:** 1 **Units:** mg/L
Sample ID: L0705256-02 **File ID:** P2.051407.155616 **Dil:** 1 **Matrix:** Leachate

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
BERYLLIUM	0.0243		0	U	.025	97.3	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

KEMRON FORMS - Modified 04/20/2007 - POST_SPIKE
Version 2.0 PDF File ID: 766327
Report generated 05/15/2007 10:01

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

00063254

Login Number: L0705163 **Workgroup (AAB#):** WG240269

Analytical Method: 6010B **Instrument ID:** PE-ICP2

ICAL Worknum: WG240325 **Initial Calibration Date:** 14-MAY-2007 14:16

Analyte	WG240325-01		WG240325-02		WG240325-03		WG240325-04		WG240325-05			
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	R	Q
Beryllium	0	-1404.99193	.0005	383.4142607	.001	745.9384783	.025	34127.0077	.05	67433.36373	0.999984	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/08/2007
Version 1.5 PDF File ID: 766335
Report generated 05/15/2007 10:01

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

00063255

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240325-07

Instrument ID: PE-ICP2 Run Time: 14:27 Method: 6010B

File ID: P2.051407.142725 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG240269 Cal ID: PE-ICP - 14-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Beryllium	0.000500	0.00200	-.0000463	1	U

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 10/02/2006
Version 1.5 PDF File ID: 766337
Report generated 05/15/2007 10:02

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063256

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240325-11
Instrument ID: PE-ICP2 Run Time: 14:49 Method: 6010B
File ID: P2.051407.144933 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG240269 Cal ID: PE-ICP - 14-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Beryllium	0.000500	0.00200	-0.0000807	1	U

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 766340
Report generated 05/15/2007 10:02

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063257

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240325-13
Instrument ID: PE-ICP2 Run Time: 16:19 Method: 6010B
File ID: P2.051407.161924 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG240269 Cal ID: PE-ICP - 14-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Beryllium	0.000500	0.00200	-0.0000564	1	U

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 766340
Report generated 05/15/2007 10:02

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

00063258

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240325-06
Instrument ID: PE-ICP2 Run Time: 14:22 Method: 6010B
File ID: P2.051407.142207 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG240269 Cal ID: PE-ICP - 14-MAY-07

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0499	99.7	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 766336
Report generated 05/15/2007 10:02

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063259

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240325-10
Instrument ID: PE-ICP2 Run Time: 14:44 Method: 6010B
File ID: P2.051407.144411 Analyst: KHR
Workgroup (AAB#): WG240269 Cal ID: PE-ICP - 14-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0492	mg/L	98.4	90 - 110		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 766339
Report generated 05/15/2007 10:02

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063260

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240325-12
Instrument ID: PE-ICP2 Run Time: 16:14 Method: 6010B
File ID: P2.051407.161406 Analyst: KHR
Workgroup (AAB#): WG240269 Cal ID: PE-ICP - 14-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0494	mg/L	98.9	90 - 110		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 766339
Report generated 05/15/2007 10:02

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

00063261

Login number: L0705163 **Workgroup (AAB#):** WG240269
Instrument ID: PE-ICP2 **Method:** 6010B
Sol. A : WG240325-08 **File ID:** P2.051407.143337 **Units:** mg/L
Sol. AB : WG240325-09 **File ID:** P2.051407.143854

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	0.000490	NS	0.250	0.254	102	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

00063262

Login Number: L0705163 **Date:** 01/08/2007

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	396.15	0	0	0.206	0	0
ANTIMONY	206.84	0	0	-0.740	0	0
ARSENIC	188.98	0	0.0237	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	-0.000453	1.00	0	0
CALCIUM	227.55	0	-0.370	0.0414	0	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	-0.0647
COPPER	327.39	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	0	-0.143	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	-0.185	0	-0.231	-0.0949	-0.230
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0.0416	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0.504	0	0.200	0	-0.130
ZINC	206.20	0	0	0	0	0

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 766334
Report generated 05/15/2007 10:01

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

00063263

Login Number: L0705163 **Date:** 01/08/2007

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	396.15	0	0.274	0	0	0
ANTIMONY	206.84	0	0	0	0	19.8
ARSENIC	188.98	0	-0.0104	-0.0875	0	-3.78
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	-0.0105
BORON	249.68	0	0.0238	50.1	3.51	1.50
CADMIUM	228.80	0	0	0	-7.33	0
CALCIUM	227.55	0	0	0	174	-21.8
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	0.436
COPPER	327.39	0	-0.0137	0	0.380	-0.0467
IRON	239.56	0	0.0227	0	1.91	0.331
LEAD	220.35	0	-0.0214	0	0.666	-0.100
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0.638	0	0	0
MANGANESE	257.61	-1.04	-0.0173	-0.755	-0.0418	-0.110
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0.948	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0.0228	0	-0.382	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	2.97	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	-0.0233	0	0	0.297
VANADIUM	290.88	0	0.00481	0	0	0
ZINC	206.20	0	0.00300	0	0	-6.39

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 766334
Report generated 05/15/2007 10:01

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

00063264

Login Number: L0705163 **Date:** 01/08/2007

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	CU	FE	K	LI	MG
ALUMINUM	396.15	0	0.108	0	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	-0.115	0	0	0.0133
BARIUM	233.53	0	0.0217	0	0	0
BERYLLIUM	234.86	0	0.171	0	0	0
BORON	249.68	0	-4.09	0	0	0
CADMIUM	228.80	0	-0.00172	0	0	0
CALCIUM	227.55	-2.44	-8.15	0	0	0.104
CHROMIUM	267.72	0	-0.0115	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0	-0.0550	0	0	0
IRON	239.56	0	0	0	0	0.0276
LEAD	220.35	0.341	0.0593	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0.174	0	0	0
MANGANESE	257.61	-0.0457	-0.0659	-0.0181	-0.794	0.0147
MOLYBDENUM	202.03	0	-0.0342	0	11.9	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0.831	0	0	0
SELENIUM	196.03	0	-0.444	0	0	0.00120
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0.0717	-0.0541	0	0	0.00521
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	-16.4	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0.0284
VANADIUM	290.88	0	-0.0723	0	0	-0.0542
ZINC	206.20	-0.309	0.00450	0	0	0

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 766334
Report generated 05/15/2007 10:01

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

00063265

Login Number: L0705163 **Date:** 01/08/2007

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	MN	MO	NA	NI	PB
ALUMINUM	396.15	0	51.0	0	0	0
ANTIMONY	206.84	0	-17.4	0	0	0
ARSENIC	188.98	0	3.15	0	0	0
BARIUM	233.53	0	-0.740	0	0	0
BERYLLIUM	234.86	-0.131	-0.545	0	-0.00974	0
BORON	249.68	0	-2.08	0	0	0
CADMIUM	228.80	0	0	0	-0.0660	0
CALCIUM	227.55	0	-25.0	0	-1100	0
CHROMIUM	267.72	0.554	-0.0135	0	0	0
COBALT	228.62	0	-0.668	0	0.129	0
COPPER	327.39	0	-0.519	0	-0.0905	-0.0630
IRON	239.56	-1.38	0	0	0	0
LEAD	220.35	0.232	-2.35	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	-5.58	0	0	0.0252
MANGANESE	257.61	0	-0.0482	-0.00916	-0.0340	-0.0413
MOLYBDENUM	202.03	-0.209	0	0	0.134	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0.0278	0	0
SELENIUM	196.03	1.11	0.199	0	-0.202	0
SILICON	251.61	0	12.9	0	0	0
SILVER	328.07	0.130	0.0781	0	0	0
SODIUM	589.59	0	0	0.181	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	-1.50	0.660	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0.578	0	0	0
ZINC	206.20	0	0	0	-0.244	-0.330

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 766334
Report generated 05/15/2007 10:01

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

00063266

Login Number: L0705163 **Date:** 01/08/2007

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	SB	SE	SI	SN	SR
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0	0	-7.64	0
ARSENIC	188.98	0	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	0	2.79	0	0
CHROMIUM	267.72	0	-0.0706	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	-0.117	0	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	-0.0924	0	0	0
MANGANESE	257.61	-0.0505	-0.0281	-0.185	-0.0445	-0.625
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	-0.288	-0.262	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	1.61
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0	0	0	0
ZINC	206.20	-0.420	0	0	0	0

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 766334
Report generated 05/15/2007 10:01

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

00063267

Login Number: L0705163 **Date:** 01/08/2007

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	TI	TL	V	ZN
ALUMINUM	396.15	0	0	0	0
ANTIMONY	206.84	0	0	-3.59	0
ARSENIC	188.98	0	0	0.0930	0
BARIUM	233.53	0	0	-2.27	0
BERYLLIUM	234.86	0	0	0	0
BORON	249.68	0	0	0	0
CADMIUM	228.80	0	0	0.0980	0
CALCIUM	227.55	0	0	11.3	0
CHROMIUM	267.72	0	0	-0.605	-0.0845
COBALT	228.62	2.07	0	0	0
COPPER	327.39	-1.79	0	-0.842	-0.0613
IRON	239.56	0	0	0	0
LEAD	220.35	-0.776	0	-0.153	0
LITHIUM	670.78	0	0	0	0
MAGNESIUM	279.08	0	0	-0.0280	0
MANGANESE	257.61	-0.227	-0.0414	-0.0601	-0.0553
MOLYBDENUM	202.03	0	0	-0.288	0
NICKEL	231.60	0	0.286	0	0
POTASSIUM	766.49	0	0	0	0
SELENIUM	196.03	0	0	0.593	0
SILICON	251.61	0	0	0	0
SILVER	328.07	0	0	-6.38	0
SODIUM	589.59	0	0	0	0
STRONTIUM	407.77	0	0	0	0
THALLIUM	190.80	-10.1	0	0	0
TIN	189.93	0	0	0	0
TITANIUM	334.94	0	0	0	0
VANADIUM	290.88	0	0	0	0
ZINC	206.20	0	0	-0.100	0

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 766334
Report generated 05/15/2007 10:01

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

00063268

Login Number: L0705163 **Date:** 03/16/2007

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	500.0
Antimony	10.00	40.0
Arsenic	10.00	10.0
Barium	10.00	10.0
Beryllium	10.00	2.0
Boron	10.00	20.0
Cadmium	10.00	3.0
Calcium	10.00	500.0
Chromium	10.00	50.0
Cobalt	10.00	50.0
Copper	10.00	50.0
Iron	10.00	400.0
Lead	10.00	50.0
Lithium	10.00	2.0
Magnesium	10.00	500.0
Manganese	10.00	30.0
Molybdenum	10.00	50.0
Nickel	10.00	50.0
Potassium	10.00	100.0
Selenium	10.00	50.0
Silicon	10.00	10.0
Silver	10.00	10.0
Sodium	10.00	200.0
Strontium	10.00	3.0
Thallium	10.00	50.0
Tin	10.00	50.0
Titanium	10.00	10.0
Vanadium	10.00	50.0
Zinc	10.00	40.0

Comments:

2.2.2 Metals ICP-MS Data

2.2.2.1 Summary Data

KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0705163

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: WG240228(6020) - Due to continuing calibration verification failure for cadmium and chromium on 16-May-2007 at 20:50, client sample 01 and all batch QA/QC samples were reanalyzed on a later calibration which was compliant for cadmium and chromium.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG240228(6020) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

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

Analyst: JYH

Approved: 18-MAY-07
Maren Berry

LABORATORY REPORT

L0705163

00063272

05/18/07 15:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Biulding
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Diane Mever

Account Number: 2773
Work ID: LHAAP

P.O. Number: 200328

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
03SB03-01-SPLP	L0705163-01	6020	1	05-MAY-07
03SB03-01-SPLP	L0705163-01	6020	1	05-MAY-07
07SB06-01-SPLP	L0705163-04	6020	1	05-MAY-07
51SB02-01-SPLP	L0705163-05	6020	1	05-MAY-07
55SB03-01-SPLP	L0705163-06	6020	1	05-MAY-07

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063273

Sample Number: **L0705163-01**
Client ID: **03SB03-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240228**
Collect Date: **05/03/2007 14:00**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **05/10/2007 11:30**
Cal Date: **05/16/2007 10:33**
Run Date: **05/16/2007 20:11**
File ID: **EL.051607.201154**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Arsenic, Leachable	7440-38-2	0.0562		0.00100	0.000250
Copper, Leachable	7440-50-8	0.00586		0.00200	0.000500
Lead, Leachable	7439-92-1	0.0112		0.00100	0.000250
Antimony, Leachable	7440-36-0	0.00194		0.00100	0.000250

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063274

Sample Number: **L0705163-01**
Client ID: **03SB03-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240228**
Collect Date: **05/03/2007 14:00**
Sample Tag: **02**

PrePrep Method: **1312**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **05/10/2007 11:30**
Cal Date: **05/17/2007 09:43**
Run Date: **05/17/2007 11:07**
File ID: **EL.051707.110713**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Cadmium, Leachable	**7440-43-9**		**U**	**0.000500**	**0.000125**
Chromium, Leachable	**7440-47-3**	**0.00635**		**0.00200**	**0.000500**

U Not detected at or above adjusted sample detection limit

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063275

Sample Number: **L0705163-04**
Client ID: **07SB06-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240228**
Collect Date: **05/04/2007 09:45**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **05/10/2007 11:30**
Cal Date: **05/16/2007 10:33**
Run Date: **05/16/2007 20:18**
File ID: **EL.051607.201821**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Silver, Leachable	7440-22-4		U	0.00100	0.000250

U Not detected at or above adjusted sample detection limit

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063276

Sample Number: **L0705163-05**
Client ID: **51SB02-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240228**
Collect Date: **05/04/2007 11:00**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **05/10/2007 11:30**
Cal Date: **05/16/2007 10:33**
Run Date: **05/16/2007 20:24**
File ID: **EL.051607.202448**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Silver, Leachable	7440-22-4	0.00150		0.00100	0.000250

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063277

Sample Number: **L0705163-06**
Client ID: **55SB03-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240228**
Collect Date: **05/04/2007 12:40**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **05/10/2007 11:30**
Cal Date: **05/16/2007 10:33**
Run Date: **05/16/2007 20:31**
File ID: **EL.051607.203115**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Lead, Leachable	**7439-92-1**	**0.0124**		**0.00100**	**0.000250**

2.2.2.2 QC Summary Data

Example 6020 Calculations
Perkin Elmer ELAN ICP/MS

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume	50
Vi = Initial volume	40
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ppm (mg/L)	0.125

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume	50
Vi = Initial volume	0.5
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ppm (mg/L)	10

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	10
Px = Percent solids of sample (%wt)	80
$Cdry$ = Dry weight of sample (mg/kg)	12.5

12.5 ug/kg = 0.0125 mg/kg

Perkin Elmer ELAN ICP/MS

STANDARDS KEY

QC Std 1 - ICV
QC Std 2 - ICB
QC Std 3 - CRI - Soil
QC Std 4 - CRI - Water
QC Std 5 - ICSA
QC Std 6 - ICSAB
QC Std 7 - CCV
QC Std 8 - CCB

Calibration Solutions

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.0004	0.05	0.1
Sb	10	0	0.0004	0.05	0.1
As	10	0	0.0004	0.05	0.1
Ba	10	0	0.0004	0.05	0.1
Be	10	0	0.0004	0.05	0.1
Ca	1000	0	0.04	5	10
Cd	10	0	0.0004	0.05	0.1
Cr	10	0	0.0004	0.05	0.1
Co	10	0	0.0004	0.05	0.1
Cu	10	0	0.0004	0.05	0.1
Fe	1000	0	0.04	5	10
Pb	10	0	0.0004	0.05	0.1
Mg	1000	0	0.04	5	10
Mn	10	0	0.0004	0.05	0.1
Ni	10	0	0.0004	0.05	0.1
K	1000	0	0.04	5	10
Se	10	0	0.0004	0.05	0.1
Ag	10	0	0.0004	0.05	0.1
Na	1000	0	0.04	5	10
Tl	10	0	0.0004	0.05	0.1
V	10	0	0.0004	0.05	0.1
Zn	10	0	0.0004	0.05	0.1

KEMRON ENVIRONMENTAL SERVICES

TCLP Non-Volatile

Analyst(s): Rac
Date: 05-09-07

Analyst/Date		Analyst/Date	
Rac 5-09-07		Rac 5-10-07	
Time On	Temp On °C	Time Off	Temp Off °C
1600	23	0800	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
G 21	05-163-01	ME 8270	1312	SFR-173	S/S	100		✓	100.03	2000
G 14	02	〃	〃	〃	〃	〃		〃	100.04	〃
G 22	03	〃	〃	〃	〃	〃		〃	100.00	〃
D	04	ME	〃	〃	〃	〃		〃	100.00	〃
D	05	〃	〃	〃	〃	〃		〃	100.02	〃
D	06	〃	〃	〃	〃	〃		〃	100.01	〃
G-3	07	8082	〃	〃	〃	〃		〃	100.05	〃
G-9	08	8270	〃	〃	〃	〃		〃	100.04	〃
G-29	09	〃 8082	〃	〃	〃	〃		〃	100.00	〃
N/A	FBLK	ME 〃 〃	〃	〃	N/A	N/A		〃	2000	〃

Rac 5-09-07

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

Microwave Digestion Log

Analyst(s): VC
Date: 5/10/07 11:30
LCS: .25mL STD 14864
MS/MSD:
Witness:
HNO_3 Lot #: CUA 12160
HCl Lot #: —
Digest Tube Lot #: CUA 12258
Earliest Sample Due Date: 5/18
Microwave # MW2

Box: 12 120350 7
Digestion Work Group: WG 246028

ME407 Revision # 8 Method 3015-Water
ME406 Revision # ____ Method 3051-Soil-Oil

Relinquished By: VC
Digest Received By: [signature] Date: 05-10-07

	KEMRON #	Initial Wt/Vol	Final Volume	Initial Weight	Final Weight	Comments	Due Date
1	PBW	40 mL	100	207.97 g	207.94 g	01	
2	LCSW			209.19	209.19	02	
3	LCSD			206.84	206.84	03	
4	SPCP BUC 5/9			208.20	208.19	WG 239569 16:00	
5	05-163.01			205.78	205.76		5/18
6	04			208.39	208.38		
7	05			207.73	207.73		
8	06			204.60	204.59		
9							
10							
11							
12							
13							
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26							
27							
28							
29							
30							

VC 5/10/07

Comments: _____

Primary Review: Verbal Calls 5/10/07 Secondary Review: [signature] 5/10/07

KEMRON Environmental Services

Instrument Run Log

00063283

Instrument: ELAN-ICP Dataset: 051607A.REP

Analyst1: JYH Analyst2: N/A

Method: 6020 SOP: ME700 Rev: 4

Maintenance Log ID: 19117

Calibration Std: STD18894 ICV/CCV Std: STD18896 Post Spike: STD15023

ICSA: STD19314 ICSAB: STD19315

Workgroups: 240445,240009,240008,240455,240228

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.051607.100755	Blank	Blank		1		05/16/07 10:07
2	EL.051607.101419	WG240454-01	Calibration Point		1		05/16/07 10:14
3	EL.051607.102043	WG240454-02	Calibration Point		1		05/16/07 10:20
4	EL.051607.102708	WG240454-03	Calibration Point		1		05/16/07 10:27
5	EL.051607.103334	WG240454-04	Calibration Point		1		05/16/07 10:33
6	EL.051607.104001	WG240454-05	Initial Calibration Verification		1		05/16/07 10:40
7	EL.051607.104626	WG240454-06	Initial Calib Blank		1		05/16/07 10:46
8	EL.051607.105252	WG240454-07	CRQL Check Solid		1		05/16/07 10:52
9	EL.051607.105922	WG240454-08	CRQL Check Water		1		05/16/07 10:59
10	EL.051607.110551	WG240454-09	Interference Check		1		05/16/07 11:05
11	EL.051607.111219	WG240454-10	Interference Check		1		05/16/07 11:12
12	EL.051607.111846	WG240454-11	CCV		1		05/16/07 11:18
13	EL.051607.112512	WG240454-12	CCB		1		05/16/07 11:25
14	EL.051607.113530	WG240436-03	Method/Prep Blank	40/100	1		05/16/07 11:35
15	EL.051607.114154	WG240436-04	Laboratory Control S	40/100	1		05/16/07 11:41
16	EL.051607.114818	WG240436-02	Reference Sample		1		05/16/07 11:48
17	EL.051607.115442	WG240436-06	Matrix Spike	40/100	1		05/16/07 11:54
18	EL.051607.120107	WG240436-07	Matrix Spike Duplica	40/100	1		05/16/07 12:01
19	EL.051607.121105	L0705361-01	SOUTH POND	40/100	5		05/16/07 12:11
20	EL.051607.121730	WG240445-01	Post Digestion Spike		5	L0705361-01	05/16/07 12:17
21	EL.051607.122356	WG240445-02	Serial Dilution		25	L0705361-01	05/16/07 12:23
22	EL.051607.123022	WG240454-13	CCV		1		05/16/07 12:30
23	EL.051607.123648	WG240454-14	CCB		1		05/16/07 12:36
24	EL.051607.124313	WG240436-01	Reference Sample		1		05/16/07 12:43
25	EL.051607.124939	WG240436-05	Duplicate	40/100	1		05/16/07 12:49
26	EL.051607.125606	L0705345-02	8910 P-R-DIS	40/100	1		05/16/07 12:56
27	EL.051607.130233	L0705347-02	OW01-GW-051407	40/100	1		05/16/07 13:02
28	EL.051607.130859	L0705347-04	OW02-GW-051407	40/100	1		05/16/07 13:08
29	EL.051607.131523	L0705041-05	C-23-SS018(0.0-0.5)	.5/200	5		05/16/07 13:15
30	EL.051607.132148	L0705041-06	C-23-SS019(0.0-0.5)	.512/200	5		05/16/07 13:21
31	EL.051607.132814	L0705041-07	C-23-SS021(0.0-0.5)	.501/200	5		05/16/07 13:28
32	EL.051607.133439	L0705041-08	C-23-SS022(0.0-0.5)	.5/200	5		05/16/07 13:34
33	EL.051607.134106	WG240454-15	CCV		1		05/16/07 13:41
34	EL.051607.134731	WG240454-16	CCB		1		05/16/07 13:47
35	EL.051607.135356	L0705041-09	C-23-SS023(0.0-0.5)	.509/200	5		05/16/07 13:53
36	EL.051607.140022	L0705041-10	C-23-SS024(0.0-0.5)	.5/200	5		05/16/07 14:00
37	EL.051607.140649	L0705041-11	C-23-SS013(0.0-0.5)	.507/200	5		05/16/07 14:06

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Approved: May 17, 2007

KEMRON Environmental Services

Instrument Run Log

00063284

Instrument: ELAN-ICP Dataset: 051607A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 4
Maintenance Log ID: 19117

Calibration Std: STD18894 ICV/CCV Std: STD18896 Post Spike: STD15023
ICSA: STD19314 ICSAB: STD19315

Workgroups: 240445,240009,240008,240455,240228

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.051607.141316	L0705041-12	C-23-SS014(0.0-0.5)	.509/200	5		05/16/07 14:13
39	EL.051607.141943	L0705041-13	C-23-SS015(0.0-0.5)	.507/200	5		05/16/07 14:19
40	EL.051607.142611	L0705041-14	C-23-SS016(0.0-0.5)	.5/200	5		05/16/07 14:26
41	EL.051607.143239	L0705041-15	C-23-SS009(0.0-0.5)	.517/200	5		05/16/07 14:32
42	EL.051607.143908	L0705041-16	C-23-SS010(0.0-0.5)	.503/200	5		05/16/07 14:39
43	EL.051607.144535	L0705041-17	C-23-SS011(0.0-0.5)	.5/200	5		05/16/07 14:45
44	EL.051607.145200	WG240454-17	CCV		1		05/16/07 14:52
45	EL.051607.145826	WG240454-18	CCB		1		05/16/07 14:58
46	EL.051607.150450	L0705041-18	C-23-SS012(0.0-0.5)	.505/200	1		05/16/07 15:04
47	EL.051607.151116	L0705041-19	C-DUP001(0.0-0.5)	.512/200	1		05/16/07 15:11
48	EL.051607.151742	L0705041-20	C-23-SS005(0.0-0.5)	.503/200	1		05/16/07 15:17
49	EL.051607.152408	L0705041-25	C-23-SS002(0.0-0.5)	.5/200	5		05/16/07 15:24
50	EL.051607.153035	L0705041-26	C-23-SS003(0.0-0.5)	.5/200	5		05/16/07 15:30
51	EL.051607.153702	L0705041-27	C-23-SS004(0.0-0.5)	.51/200	5		05/16/07 15:37
52	EL.051607.154329	L0705132-01	BH10-1-1	.5/200	25		05/16/07 15:43
53	EL.051607.154957	L0705132-02	BH10-1-2	.5/200	25		05/16/07 15:49
54	EL.051607.155625	L0705132-03	BH10-1-3	.5/200	25		05/16/07 15:56
55	EL.051607.160252	WG240454-19	CCV		1		05/16/07 16:02
56	EL.051607.160918	WG240454-20	CCB		1		05/16/07 16:09
57	EL.051607.162032	IDL1	IDL1		1		05/16/07 16:20
58	EL.051607.162656	IDL2	IDL2		1		05/16/07 16:26
59	EL.051607.163320	IDL3	IDL3		1		05/16/07 16:33
60	EL.051607.163945	IDL4	IDL4		1		05/16/07 16:39
61	EL.051607.164610	IDL5	IDL5		1		05/16/07 16:46
62	EL.051607.165235	IDL6	IDL6		1		05/16/07 16:52
63	EL.051607.165900	IDL7	IDL7		1		05/16/07 16:59
64	EL.051607.170526	WG240454-21	CCV		1		05/16/07 17:05
65	EL.051607.171152	WG240454-22	CCB		1		05/16/07 17:11
66	EL.051607.171816	WG240369-01	Method/Prep Blank	40/100	1		05/16/07 17:18
67	EL.051607.172443	WG240369-02	Laboratory Control S	40/100	1		05/16/07 17:24
68	EL.051607.173109	WG240369-03	Laboratory Control S	40/100	1		05/16/07 17:31
69	EL.051607.173736	WG240282-01	Fluid Blank		1		05/16/07 17:37
70	EL.051607.174403	L0705294-01	AV-NCB-PE-UNK-24-C3-0	40/100	1		05/16/07 17:44
71	EL.051607.175029	L0705294-02	AV-NCB-AS-UNK-4-05090	40/100	1		05/16/07 17:50
72	EL.051607.175653	L0705294-03	AV-NCB-AS-SAN-8-05100	40/100	1		05/16/07 17:56
73	EL.051607.180318	L0705294-04	AV-NCB-PE-UNK-24-C4-0	40/100	1		05/16/07 18:03
74	EL.051607.180943	WG240455-01	Post Digestion Spike		1	L0705294-04	05/16/07 18:09

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Approved: May 17, 2007

KEMRON Environmental Services

Instrument Run Log

00063285

Instrument: ELAN-ICP Dataset: 051607A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 4
Maintenance Log ID: 19117

Calibration Std: STD18894 ICV/CCV Std: STD18896 Post Spike: STD15023
ICSA: STD19314 ICSAB: STD19315

Workgroups: 240445,240009,240008,240455,240228

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	EL.051607.181608	WG240455-02	Serial Dilution		5	L0705294-04	05/16/07 18:16
76	EL.051607.182234	WG240454-23	CCV		1		05/16/07 18:22
77	EL.051607.182859	WG240454-24	CCB		1		05/16/07 18:28
78	EL.051607.183524	L0705294-05	AV-NCB-05-UNK-2-05090	40/100	1		05/16/07 18:35
79	EL.051607.184150	L0705294-06	AV-NCB-PE-SAN-24-C2-0	40/100	1		05/16/07 18:41
80	EL.051607.184816	L0705297-02	AV-NCB-AS-UNK-38-0508	40/100	1		05/16/07 18:48
81	EL.051607.185443	L0705297-03	AV-NCB-AS-UNK-39-0508	40/100	1		05/16/07 18:54
82	EL.051607.190110	L0705297-04	AV-NCB-AS-UNK-24-C2-0	40/100	1		05/16/07 19:01
83	EL.051607.190737	L0705297-05	AV-NCB-PE-UNK-24-C1-0	40/100	1		05/16/07 19:07
84	EL.051607.191405	L0705297-06	AV-NCB-PE-SAN-24-C1-0	40/100	1		05/16/07 19:14
85	EL.051607.192031	L0705297-07	AV-NCB-AS-SAN-6-05090	40/100	1		05/16/07 19:20
86	EL.051607.192656	L0705297-08	AV-NCB-AS-SAN-7-05080	40/100	1		05/16/07 19:26
87	EL.051607.193321	WG240454-25	CCV		1		05/16/07 19:33
88	EL.051607.193947	WG240454-26	CCB		1		05/16/07 19:39
89	EL.051607.194611	WG240028-01	Method/Prep Blank	40/100	1		05/16/07 19:46
90	EL.051607.195236	WG240028-02	Laboratory Control S	40/100	1		05/16/07 19:52
91	EL.051607.195902	WG240028-03	Laboratory Control S	40/100	1		05/16/07 19:59
92	EL.051607.200528	WG239969-01	Fluid Blank		1		05/16/07 20:05
93	EL.051607.201154	L0705163-01	03SB03-01-SPLP	40/100	1		05/16/07 20:11
94	EL.051607.201821	L0705163-04	07SB06-01-SPLP	40/100	1		05/16/07 20:18
95	EL.051607.202448	L0705163-05	51SB02-01-SPLP	40/100	1		05/16/07 20:24
96	EL.051607.203115	L0705163-06	55SB03-01-SPLP	40/100	1		05/16/07 20:31
97	EL.051607.203743	WG240228-01	Post Digestion Spike		1	L0705163-06	05/16/07 20:37
98	EL.051607.204411	WG240228-02	Serial Dilution		5	L0705163-06	05/16/07 20:44
99	EL.051607.205038	WG240454-27	CCV		1		05/16/07 20:50
100	EL.051607.205703	WG240454-28	CCB		1		05/16/07 20:57

Approved: May 17, 2007

KEMRON Environmental Services

Instrument Run Log

00063286

Instrument: ELAN-ICP Dataset: 051707A.REP

Analyst1: JYH Analyst2: N/A

Method: 6020 SOP: ME700 Rev: 4

Maintenance Log ID: 19117

Calibration Std: STD18894 ICV/CCV Std: STD18896 Post Spike: STD15023

ICSA: STD19314 ICSAB: STD19315

Workgroups: 240228,240548,240006,240484,240520,240516

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.051707.091749	Blank	Blank		1		05/17/07 09:17
2	EL.051707.092413	WG240563-01	Calibration Point		1		05/17/07 09:24
3	EL.051707.093038	WG240563-02	Calibration Point		1		05/17/07 09:30
4	EL.051707.093703	WG240563-03	Calibration Point		1		05/17/07 09:37
5	EL.051707.094328	WG240563-04	Calibration Point		1		05/17/07 09:43
6	EL.051707.094955	WG240563-05	Initial Calibration Verification		1		05/17/07 09:49
7	EL.051707.095620	WG240563-06	Initial Calib Blank		1		05/17/07 09:56
8	EL.051707.100246	WG240563-07	CRQL Check Solid		1		05/17/07 10:02
9	EL.051707.100916	WG240563-08	CRQL Check Water		1		05/17/07 10:09
10	EL.051707.101545	WG240563-09	Interference Check		1		05/17/07 10:15
11	EL.051707.102213	WG240563-10	Interference Check		1		05/17/07 10:22
12	EL.051707.102840	WG240563-11	CCV		1		05/17/07 10:28
13	EL.051707.103505	WG240563-12	CCB		1		05/17/07 10:35
14	EL.051707.104130	WG240028-01	Method/Prep Blank	40/100	1		05/17/07 10:41
15	EL.051707.104755	WG240028-02	Laboratory Control S	40/100	1		05/17/07 10:47
16	EL.051707.105421	WG240028-03	Laboratory Control S	40/100	1		05/17/07 10:54
17	EL.051707.110047	WG239969-01	Fluid Blank		1		05/17/07 11:00
18	EL.051707.110713	L0705163-01	03SB03-01-SPLP	40/100	1		05/17/07 11:07
19	EL.051707.111339	WG240228-03	Post Digestion Spike		1	L0705163-01	05/17/07 11:13
20	EL.051707.112006	WG240228-02	Serial Dilution		5	L0705163-06	05/17/07 11:20
21	EL.051707.112633	WG240563-13	CCV		1		05/17/07 11:26
22	EL.051707.113259	WG240563-14	CCB		1		05/17/07 11:32
23	EL.051707.114117	WG240531-03	Method/Prep Blank	40/100	1		05/17/07 11:41
24	EL.051707.114741	WG240531-04	Laboratory Control S	40/100	1		05/17/07 11:47
25	EL.051707.115405	L0705399-01	SOUTH POND	40/100	5		05/17/07 11:54
26	EL.051707.120029	WG240531-02	Reference Sample		1		05/17/07 12:00
27	EL.051707.120654	WG240531-06	Matrix Spike	40/100	1		05/17/07 12:06
28	EL.051707.121319	WG240531-07	Matrix Spike Duplica	40/100	1		05/17/07 12:13
29	EL.051707.121945	L0705393-02	OW03-GW-051507	40/100	1		05/17/07 12:19
30	EL.051707.122610	L0705393-04	OW04-GW-051507	40/100	1		05/17/07 12:26
31	EL.051707.123237	WG240548-01	Post Digestion Spike		1	L0705393-04	05/17/07 12:32
32	EL.051707.123903	WG240548-02	Serial Dilution		5	L0705393-04	05/17/07 12:39
33	EL.051707.124530	WG240563-15	CCV		1		05/17/07 12:45
34	EL.051707.125155	WG240563-16	CCB		1		05/17/07 12:51
35	EL.051707.125820	L0705366-20	AV-NCB-EB-1-051507	40/100	1		05/17/07 12:58
36	EL.051707.130447	WG240531-01	Reference Sample		1		05/17/07 13:04
37	EL.051707.131113	WG240531-05	Duplicate	40/100	1		05/17/07 13:11

Approved:

KEMRON Environmental Services

Instrument Run Log

00063287

Instrument: ELAN-ICP Dataset: 051707A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 4
Maintenance Log ID: 19117

Calibration Std: STD18894 ICV/CCV Std: STD18896 Post Spike: STD15023
ICSA: STD19314 ICSAB: STD19315

Workgroups: 240228,240548,240006,240484,240520,240516

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.051707.131737	L0705393-06	OW05-GW-051507	40/100	1		05/17/07 13:17
39	EL.051707.132402	L0705393-08	OW06-GW-051507	40/100	1		05/17/07 13:24
40	EL.051707.133027	L0705393-10	OW08-GW-051507	40/100	1		05/17/07 13:30
41	EL.051707.133652	L0705393-12	OW09-GW-051507	40/100	1		05/17/07 13:36
42	EL.051707.134318	L0705393-20	OW11-GW-051507	40/100	1		05/17/07 13:43
43	EL.051707.134944	L0705393-22	OW11-GW-051507/D	40/100	1		05/17/07 13:49
44	EL.051707.135611	L0705393-24	OW12-GW-051507	40/100	1		05/17/07 13:56
45	EL.051707.140237	WG240563-17	CCV		1		05/17/07 14:02
46	EL.051707.140902	WG240563-18	CCB		1		05/17/07 14:09
47	EL.051707.141528	IDL1	IDL1		1		05/17/07 14:15
48	EL.051707.142155	IDL2	IDL2		1		05/17/07 14:21
49	EL.051707.142822	IDL3	IDL3		1		05/17/07 14:28
50	EL.051707.143450	IDL4	IDL4		1		05/17/07 14:34
51	EL.051707.144116	IDL5	IDL5		1		05/17/07 14:41
52	EL.051707.144741	IDL6	IDL6		1		05/17/07 14:47
53	EL.051707.145406	IDL7	IDL7		1		05/17/07 14:54
54	EL.051707.150031	WG240563-19	CCV		1		05/17/07 15:00
55	EL.051707.150657	WG240563-20	CCB		1		05/17/07 15:06
56	EL.051707.151622	WG239883-02	Reference Sample		1		05/17/07 15:16
57	EL.051707.152247	WG239883-07	Matrix Spike	40/100	1		05/17/07 15:22
58	EL.051707.152913	WG239883-08	Matrix Spike Duplica	40/100	1		05/17/07 15:29
59	EL.051707.153539	WG240006-03	Post Digestion Spike		1	L0705188-01	05/17/07 15:35
60	EL.051707.154206	WG240006-04	Serial Dilution		5	L0705188-01	05/17/07 15:42
61	EL.051707.154833	WG240563-21	CCV		1		05/17/07 15:48
62	EL.051707.155458	WG240563-22	CCB		1		05/17/07 15:54
63	EL.051707.160129	WG239836-02	Method/Prep Blank	40/100	1		05/17/07 16:01
64	EL.051707.160753	WG239836-03	Laboratory Control S	40/100	1		05/17/07 16:07
65	EL.051707.161417	WG239836-01	Reference Sample		10		05/17/07 16:14
66	EL.051707.162041	WG239836-04	Matrix Spike	40/100	10		05/17/07 16:20
67	EL.051707.162706	WG239836-05	Matrix Spike Duplica	40/100	10		05/17/07 16:27
68	EL.051707.163331	L0705147-41	SPE-G-MW-58	40/100	10		05/17/07 16:33
69	EL.051707.163957	WG240484-01	Post Digestion Spike		10	L0705147-41	05/17/07 16:39
70	EL.051707.164622	WG240484-02	Serial Dilution		50	L0705147-41	05/17/07 16:46
71	EL.051707.165249	WG240563-23	CCV		1		05/17/07 16:52
72	EL.051707.165914	WG240563-24	CCB		1		05/17/07 16:59
73	EL.051707.170539	L0705147-42	SPE-G-MW-58-DIS	40/100	10		05/17/07 17:05
74	EL.051707.171205	L0705147-44	SPE-G-MW-59-DUP	40/100	10		05/17/07 17:12

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KEMRON Environmental Services

Instrument Run Log

00063288

Instrument: ELAN-ICP Dataset: 051707A.REP

Analyst1: JYH Analyst2: N/A

Method: 6020 SOP: ME700 Rev: 4

Maintenance Log ID: 19117

Calibration Std: STD18894 ICV/CCV Std: STD18896 Post Spike: STD15023

ICSA: STD19314 ICSAB: STD19315

Workgroups: 240228,240548,240006,240484,240520,240516

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	EL.051707.171832	L0705147-47	SPE-G-MW-59-DIS	40/100	10		05/17/07 17:18
76	EL.051707.172500	L0705147-48	SPE-G-MW-60	40/100	10		05/17/07 17:25
77	EL.051707.173125	L0705147-49	SPE-G-MW-60-DIS	40/100	10		05/17/07 17:31
78	EL.051707.173750	L0705147-50	SPE-K-FB-1	40/100	1		05/17/07 17:37
79	EL.051707.174414	L0705147-51	SPE-K-FB-3	40/100	1		05/17/07 17:44
80	EL.051707.175039	L0705147-52	SPE-K-FB-3-DIS	40/100	1		05/17/07 17:50
81	EL.051707.175705	L0705147-53	SPE-K-EQBLK-1	40/100	1		05/17/07 17:57
82	EL.051707.180331	WG240563-25	CCV		1		05/17/07 18:03
83	EL.051707.180956	WG240563-26	CCB		1		05/17/07 18:09
84	EL.051707.181621	WG239834-02	Method/Prep Blank	40/100	1		05/17/07 18:16
85	EL.051707.182247	WG239834-03	Laboratory Control S	40/100	1		05/17/07 18:22
86	EL.051707.182913	WG239834-01	Reference Sample		10		05/17/07 18:29
87	EL.051707.183540	WG239834-04	Matrix Spike	40/100	10		05/17/07 18:35
88	EL.051707.184207	WG239834-05	Matrix Spike Duplica	40/100	10		05/17/07 18:42
89	EL.051707.184834	L0705147-21	SPE-G-MW-17D	40/100	10		05/17/07 18:48
90	EL.051707.185502	WG240520-01	Post Digestion Spike		10	L0705147-21	05/17/07 18:55
91	EL.051707.190128	WG240520-02	Serial Dilution		50	L0705147-21	05/17/07 19:01
92	EL.051707.190752	L0705147-23	SPE-G-MW-18	40/100	10		05/17/07 19:07
93	EL.051707.191417	L0705147-24	SPE-G-MW-18-DIS	40/100	10		05/17/07 19:14
94	EL.051707.192043	WG240563-27	CCV		1		05/17/07 19:20
95	EL.051707.192708	WG240563-28	CCB		1		05/17/07 19:27
96	EL.051707.193333	L0705147-25	SPE-G-MW-35D	40/100	10		05/17/07 19:33
97	EL.051707.193959	L0705147-26	SPE-G-MW-35D-DIS	40/100	10		05/17/07 19:39
98	EL.051707.194624	L0705147-27	SPE-G-MW-36	40/100	10		05/17/07 19:46
99	EL.051707.195251	L0705147-28	SPE-G-MW-36-DIS	40/100	10		05/17/07 19:52
100	EL.051707.195917	L0705147-29	SPE-G-MW-44	40/100	10		05/17/07 19:59
101	EL.051707.200544	L0705147-30	SPE-G-MW-44-DIS	40/100	10		05/17/07 20:05
102	EL.051707.201212	L0705147-31	SPE-G-MW-44D	40/100	10		05/17/07 20:12
103	EL.051707.201839	L0705147-32	SPE-G-MW-44D-DIS	40/100	10		05/17/07 20:18
104	EL.051707.202507	L0705147-33	SPE-G-MW-46	40/100	10		05/17/07 20:25
105	EL.051707.203134	L0705147-34	SPE-G-MW-46-DIS	40/100	10		05/17/07 20:31
106	EL.051707.203759	WG240563-29	CCV		1		05/17/07 20:37
107	EL.051707.204425	WG240563-30	CCB		1		05/17/07 20:44
108	EL.051707.205049	L0705147-35	SPE-G-MW-46D	40/100	10		05/17/07 20:50
109	EL.051707.205715	L0705147-36	SPE-G-MW-46D-DIS	40/100	10		05/17/07 20:57
110	EL.051707.210340	L0705147-37	SPE-G-MW-57	40/100	10		05/17/07 21:03
111	EL.051707.211006	L0705147-38	SPE-G-MW-57-DIS	40/100	10		05/17/07 21:10

Approved:

KEMRON Environmental Services

Instrument Run Log

00063289

Instrument: ELAN-ICP Dataset: 051707A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 4
Maintenance Log ID: 19117

Calibration Std: STD18894 ICV/CCV Std: STD18896 Post Spike: STD15023
ICSA: STD19314 ICSAB: STD19315

Workgroups: 240228,240548,240006,240484,240520,240516

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
112	EL.051707.211633	L0705147-39	SPE-G-MW-57D	40/100	10		05/17/07 21:16
113	EL.051707.212259	L0705147-40	SPE-G-MW-57D-DIS	40/100	10		05/17/07 21:22
114	EL.051707.212926	WG239828-03	Method/Prep Blank	40/100	1		05/17/07 21:29
115	EL.051707.213554	WG239828-04	Laboratory Control S	40/100	1		05/17/07 21:35
116	EL.051707.214222	WG239828-01	Reference Sample		10		05/17/07 21:42
117	EL.051707.214850	WG239828-05	Matrix Spike	40/100	10		05/17/07 21:48
118	EL.051707.215517	WG240563-31	CCV		1		05/17/07 21:55
119	EL.051707.220142	WG240563-32	CCB		1		05/17/07 22:01
120	EL.051707.220809	WG239828-06	Matrix Spike Duplica	40/100	10		05/17/07 22:08
121	EL.051707.221435	L0705147-03	SPE-G-MW-3D	40/100	10		05/17/07 22:14
122	EL.051707.222101	WG240516-01	Post Digestion Spike		10	L0705147-03	05/17/07 22:21
123	EL.051707.222726	WG240516-02	Serial Dilution		50	L0705147-03	05/17/07 22:27
124	EL.051707.223352	WG239828-02	Reference Sample		10		05/17/07 22:33
125	EL.051707.224019	WG239828-07	Matrix Spike	40/100	10		05/17/07 22:40
126	EL.051707.224646	WG239828-08	Matrix Spike Duplica	40/100	10		05/17/07 22:46
127	EL.051707.225313	L0705147-04	SPE-G-MW-3D-DIS	40/100	10		05/17/07 22:53
128	EL.051707.225940	L0705147-09	SPE-G-MW-3-DUP	40/100	10		05/17/07 22:59
129	EL.051707.230608	L0705147-10	SPE-G-MW-3-DIS-DUP	40/100	10		05/17/07 23:06
130	EL.051707.231235	WG240563-33	CCV		1		05/17/07 23:12
131	EL.051707.231900	WG240563-34	CCB		1		05/17/07 23:19
132	EL.051707.232526	L0705147-11	SPE-G-MW-4	40/100	10		05/17/07 23:25
133	EL.051707.233155	L0705147-12	SPE-G-MW-4-DIS	40/100	10		05/17/07 23:31
134	EL.051707.233824	L0705147-13	SPE-G-MW-5	40/100	10		05/17/07 23:38
135	EL.051707.234451	L0705147-14	SPE-G-MW-5-DIS	40/100	10		05/17/07 23:44
136	EL.051707.235117	L0705147-15	SPE-G-MW-5D	40/100	10		05/17/07 23:51
137	EL.051707.235743	L0705147-16	SPE-G-MW-5D-DIS	40/100	10		05/17/07 23:57
138	EL.051807.000410	L0705147-17	SPE-G-MW-16	40/100	10		05/18/07 00:04
139	EL.051807.001037	L0705147-18	SPE-G-MW-16-DIS	40/100	10		05/18/07 00:10
140	EL.051807.001704	L0705147-19	SPE-G-MW-17	40/100	10		05/18/07 00:17
141	EL.051807.002332	L0705147-20	SPE-G-MW-17-DIS	40/100	10		05/18/07 00:23
142	EL.051807.002959	WG240563-35	CCV		1		05/18/07 00:29
143	EL.051807.003624	WG240563-36	CCB		1		05/18/07 00:36

Page: 4 Approved:

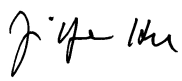
KEMRON Environmental Services
Data Checklist

00063290

Date: 16-MAY-2007
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ELAN
Curve Workgroup: 240454
Runlog ID: 16181
Analytical Workgroups: 240445,240009,240008,240455,240228

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	345,347,361,041,294,297,163
Client Forms	X
Level X	
Level 3	
Level 4	347,041,294,297,163
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	LSB
Comments	

Primary Reviewer:
16-MAY-2007



Secondary Reviewer:
17-MAY-2007

Generated: MAY-17-2007 13:31:56

KEMRON Environmental Services
Data Checklist

00063291

Date: 17-MAY-2007
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ELAN
Curve Workgroup: 240563
Runlog ID: 16209
Analytical Workgroups: 240228,240548,240006,240484,240520,240516

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	163,366,385,393,399,188,147
Client Forms	X
Level X	
Level 3	163
Level 4	366,393,188
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Primary Reviewer	JYH
Secondary Reviewer	
Comments	

Primary Reviewer: Secondary Reviewer:

Generated: MAY-18-2007 12:04:39

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

00063292

Analytical Method: 6020 AAB#: WG240228

Login Number: L0705163

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
55SB03-01-SPLP	05/04/07	05/05/07	05/10/07	180	5.95	05/16/07	180	6.38	
03SB03-01-SPLP	05/03/07	05/05/07	05/10/07	180	6.90	05/17/07	180	6.98	
51SB02-01-SPLP	05/04/07	05/05/07	05/10/07	180	6.02	05/16/07	180	6.37	
03SB03-01-SPLP	05/03/07	05/05/07	05/10/07	180	6.90	05/16/07	180	6.36	
07SB06-01-SPLP	05/04/07	05/05/07	05/10/07	180	6.07	05/16/07	180	6.37	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 11/20/2006
Version 1.5 PDF File ID: 768622
Report generated 05/18/2007 08:29

KEMRON Environmental Services

METHOD BLANK SUMMARY 00063293

Login Number: L0705163 Work Group: WG240228
Blank File ID: EL.051607.194611 Blank Sample ID: WG240028-01
Prep Date: 05/10/07 11:30 Instrument ID: ELAN-ICP
Analyzed Date: 05/16/07 19:46 Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG240028-02	EL.051607.195236	05/16/07 19:52	01
LCS2	WG240028-03	EL.051607.195902	05/16/07 19:59	01
03SB03-01-SPLP	L0705163-01	EL.051607.201154	05/16/07 20:11	01
07SB06-01-SPLP	L0705163-04	EL.051607.201821	05/16/07 20:18	01
51SB02-01-SPLP	L0705163-05	EL.051607.202448	05/16/07 20:24	01
55SB03-01-SPLP	L0705163-06	EL.051607.203115	05/16/07 20:31	01
LCS	WG240028-02	EL.051707.104755	05/17/07 10:47	02
LCS2	WG240028-03	EL.051707.105421	05/17/07 10:54	02
03SB03-01-SPLP	L0705163-01	EL.051707.110713	05/17/07 11:07	02

KEMRON FORMS - Modified 01/31/2007
Version 1.5 PDF File ID: 768623
Report generated 05/18/2007 08:29

METHOD BLANK SUMMARY

00063294

Login Number: L0705163
Work Group: WG240228
Blank File ID: EL.051707.104130
Blank Sample ID: WG240028-01
Prep Date: 05/10/07 11:30
Instrument ID: ELAN-ICP
Analyzed Date: 05/17/07 10:41
Method: 6020
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG240028-02	EL.051607.195236	05/16/07 19:52	01
LCS2	WG240028-03	EL.051607.195902	05/16/07 19:59	01
03SB03-01-SPLP	L0705163-01	EL.051607.201154	05/16/07 20:11	01
07SB06-01-SPLP	L0705163-04	EL.051607.201821	05/16/07 20:18	01
51SB02-01-SPLP	L0705163-05	EL.051607.202448	05/16/07 20:24	01
55SB03-01-SPLP	L0705163-06	EL.051607.203115	05/16/07 20:31	01
LCS	WG240028-02	EL.051707.104755	05/17/07 10:47	02
LCS2	WG240028-03	EL.051707.105421	05/17/07 10:54	02
03SB03-01-SPLP	L0705163-01	EL.051707.110713	05/17/07 11:07	02

KEMRON Environmental Services

METHOD BLANK REPORT

00063295

Login Number: L0705163 Prep Date: 05/10/07 11:30 Sample ID: WG240028-01
Instrument ID: ELAN-ICP Run Date: 05/16/07 19:46 Prep Method: 3015
File ID: EL.051607.194611 Analyst: JYH Method: 6020
Workgroup (AAB#): WG240228 Matrix: Leachate Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: ELAN-I-16-MAY-07

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Silver, Leachable	0.000250	0.00100	0.000250	1	U
Arsenic, Leachable	0.000250	0.00100	0.000250	1	U
Copper, Leachable	0.000500	0.00200	0.000500	1	U
Lead, Leachable	0.000250	0.00100	0.000250	1	U
Antimony, Leachable	0.000250	0.00100	0.000250	1	U

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

KEMRON FORMS - Modified 12/07/2006
Version 1.5 PDF File ID: 768624
Report generated 05/18/2007 08:30

KEMRON Environmental Services

METHOD BLANK REPORT

00063296

Login Number: L0705163 Prep Date: 05/10/07 11:30 Sample ID: WG240028-01
Instrument ID: ELAN-ICP Run Date: 05/17/07 10:41 Prep Method: 3015
File ID: EL.051707.104130 Analyst: JYH Method: 6020
Workgroup (AAB#): WG240228 Matrix: Leachate Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: ELAN-I-17-MAY-07

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Cadmium, Leachable	0.000125	0.000500	0.000125	1	U
Chromium, Leachable	0.000500	0.00200	0.000500	1	U

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

KEMRON FORMS - Modified 12/07/2006
Version 1.5 PDF File ID: 768624
Report generated 05/18/2007 08:30

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

00063297

Login Number: L0705163 Analyst: JYH Prep Method: 3015
Instrument ID: ELAN-ICP Matrix: Leachate Method: 6020
Workgroup (AAB#): WG240228 Units: mg/L
Sample ID: WG240028-02 LCS File ID: EL.051607.195236 Run Date: 05/16/2007 19:52
Sample ID: WG240028-03 LCS2 File ID: EL.051607.195902 Run Date: 05/16/2007 19:59

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Silver, Leachable	0.0625	0.0645	103	0.0625	0.0673	108	4.20	80 - 120	20	
Arsenic, Leachable	0.0625	0.0630	101	0.0625	0.0646	103	2.55	80 - 120	20	
Copper, Leachable	0.0625	0.0638	102	0.0625	0.0650	104	2.00	80 - 120	20	
Lead, Leachable	0.0625	0.0659	105	0.0625	0.0673	108	2.08	80 - 120	20	
Antimony, Leachable	0.0625	0.0664	106	0.0625	0.0694	111	4.34	80 - 120	20	

KEMRON FORMS - Modified 02/08/2007
Version 1.5 PDF File ID: 768625
Report generated 05/18/2007 08:30

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

00063298

Login Number: L0705163 Analyst: JYH Prep Method: 3015
Instrument ID: ELAN-ICP Matrix: Leachate Method: 6020
Workgroup (AAB#): WG240228 Units: mg/L
Sample ID: WG240028-02 LCS File ID: EL.051707.104755 Run Date: 05/17/2007 10:47
Sample ID: WG240028-03 LCS2 File ID: EL.051707.105421 Run Date: 05/17/2007 10:54

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Cadmium, Leachable	0.0625	0.0606	97.0	0.0625	0.0662	106	8.80	80 - 120	20	
Chromium, Leachable	0.0625	0.0649	104	0.0625	0.0621	99.4	4.41	80 - 120	20	

KEMRON FORMS - Modified 02/08/2007
Version 1.5 PDF File ID: 768625
Report generated 05/18/2007 08:30

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

00063299

Sample Login ID: L0705163 Worknum: WG240228
Instrument ID: ELAN-ICP Method: 6020
Sample ID: L0705163-06 File ID: EL.051607.203115 Dil: 1 Units: ug/L
Serial Dilution ID: WG240228-02 File ID: EL.051607.204411 Dil: 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Antimony	0.908		1.37		50.9	
Arsenic	25.4		25.8		1.57	
Cadmium	ND		ND			
Chromium	2.31		1.45		37.2	
Copper	2.93		2.94		0.341	
Lead	4.96		4.80		3.23	
Silver	0	U	ND	U		

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 100 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 100 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 768620
Report generated 05/18/2007 08:29

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

00063300

Sample Login ID: L0705163 Worknum: WG240228
Instrument ID: ELAN-ICP Method: 6020
Sample ID: L0705163-06 File ID: EL.051607.203115 Dil: 1 Units: ug/L
Serial Dilution ID: WG240228-02 File ID: EL.051707.112006 Dil: 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Antimony	0.908		1.26		38.8	
Arsenic	25.4		25.0		1.57	
Cadmium	ND		ND			
Chromium	2.31		2.43		5.19	
Copper	2.93		2.99		2.05	
Lead	4.96		4.81		3.02	
Silver	0	U	ND	U		

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 100 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 100 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 768620
Report generated 05/18/2007 08:29

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

00063301

Sample Login ID: L0705163 **Worknum:** WG240228
Instrument ID: ELAN-ICP **Method:** 6020
Post Spike ID: WG240228-03 **File ID:** EL.051707.111339 **Dil:** 1 **Units:** ug/L
Sample ID: L0705163-01 **File ID:** EL.051707.110713 **Dil:** 1 **Matrix:** Leachate

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	53.0		0.778		50	104.4	75 - 125	
ARSENIC	74.8		23.8		50	102.0	75 - 125	
CADMIUM	51.9		0	U	50	103.8	75 - 125	
CHROMIUM	53.2		2.54		50	101.4	75 - 125	
COPPER	59.0		2.66		50	112.7	75 - 125	
LEAD	56.5		4.51		50	104.0	75 - 125	
SILVER	51.8		0	U	50	103.7	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

KEMRON FORMS - Modified 04/20/2007 - POST_SPIKE
Version 2.0 PDF File ID: 768621
Report generated 05/18/2007 08:29

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

00063302

Sample Login ID: L0705163 **Worknum:** WG240228
Instrument ID: ELAN-ICP **Method:** 6020
Post Spike ID: WG240228-01 **File ID:** EL.051607.203743 **Dil:** 1 **Units:** ug/L
Sample ID: L0705163-06 **File ID:** EL.051607.203115 **Dil:** 1 **Matrix:** Leachate

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	53.4		0.908		50	105.0	75 - 125	
ARSENIC	73.3		25.4		50	95.8	75 - 125	
CADMIUM	54.6		0	U	50	109.2	75 - 125	
CHROMIUM	48.0		2.31		50	91.4	75 - 125	
COPPER	51.5		2.93		50	97.2	75 - 125	
LEAD	57.5		4.96		50	105.2	75 - 125	
SILVER	51.4		0	U	50	102.7	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

KEMRON FORMS - Modified 04/20/2007 - POST_SPIKE
Version 2.0 PDF File ID: 768621
Report generated 05/18/2007 08:29

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

00063303

Login Number: L0705163 **Workgroup (AAB#):** WG240228

Analytical Method: 6020 **Instrument ID:** ELAN-ICP

ICAL Worknum: WG240454 **Initial Calibration Date:** 16-MAY-2007 10:33

Analyte	WG240454-01		WG240454-02		WG240454-03		WG240454-04			
	STD	INT	STD	INT	STD	INT	STD	INT	R	Q
Antimony	0	34.448	.4	4070.61	50	495424.206	100	923900.547	0.999999	
Arsenic	0	-374.263	.4	725.285	50	138456.251	100	263295.482	0.999814	
Cadmium	0	6.241	.4	1405.5	50	150613.553	100	280514.095	0.999999	
Chromium	0	24385.248	.4	30940.571	50	933798.459	100	1800836.348	0.999425	
Copper	0	105.002	.4	2151.943	50	234068.551	100	440174.498	0.999893	
Lead	0	470.676	.4	22497.06	50	2613869.321	100	4931908.321	0.999780	
Silver	0	47.667	.4	6167.82	50	706049.579	100	1294570.786	0.999954	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/08/2007
Version 1.5 PDF File ID: 768628
Report generated 05/18/2007 08:29

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

00063304

Login Number: L0705163 **Workgroup (AAB#):** WG240228

Analytical Method: 6020 **Instrument ID:** ELAN-ICP

ICAL Worknum: WG240563 **Initial Calibration Date:** 17-MAY-2007 09:43

Analyte	WG240563-01		WG240563-02		WG240563-03		WG240563-04			
	STD	INT	STD	INT	STD	INT	STD	INT	R	Q
Antimony	0	34.951	.4	3609.119	50	453436.408	100	894589.163	0.999962	
Arsenic	0	-436.602	.4	699.655	50	137519.844	100	263765.986	0.999811	
Cadmium	0	8.406	.4	1232.042	50	139643.67	100	286090.481	0.999607	
Chromium	0	20318.556	.4	26154.498	50	817956.143	100	1603812.812	0.999999	
Copper	0	112.335	.4	1891.216	50	208265.41	100	388599.682	0.999483	
Lead	0	332.672	.4	18824.492	50	2236165.005	100	4278252.223	0.999919	
Silver	0	50.334	.4	5742.204	50	669252.265	100	1281283.868	0.999981	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/08/2007
Version 1.5 PDF File ID: 768628
Report generated 05/18/2007 08:29

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

00063305

Login Number: L0705163 Run Date: 05/16/2007 Sample ID: WG240454-06
Instrument ID: ELAN-ICP Run Time: 10:46 Method: 6020
File ID: EL.051607.104626 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 16-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.100	0.400	-.0066	1	U
Arsenic	0.100	0.400	-.0062	1	U
Cadmium	0.0500	0.200	-.0387	1	U
Chromium	0.200	0.800	.0675	1	U
Copper	0.200	0.800	-.0178	1	U
Lead	0.100	0.400	-.0128	1	U
Antimony	0.100	0.400	.133	1	F

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 10/02/2006
Version 1.5 PDF File ID: 768630
Report generated 05/18/2007 08:29

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

00063306

Login Number: L0705163 Run Date: 05/17/2007 Sample ID: WG240563-06
Instrument ID: ELAN-ICP Run Time: 09:56 Method: 6020
File ID: EL.051707.095620 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 17-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.100	0.400	-.039	1	U
Arsenic	0.100	0.400	.0158	1	U
Cadmium	0.0500	0.200	-.0362	1	U
Chromium	0.200	0.800	.052	1	U
Copper	0.200	0.800	-.0228	1	U
Lead	0.100	0.400	-.0292	1	U
Antimony	0.100	0.400	.139	1	F

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 10/02/2006
Version 1.5 PDF File ID: 768630
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063307

Login Number: L0705163 Run Date: 05/16/2007 Sample ID: WG240454-12
Instrument ID: ELAN-ICP Run Time: 11:25 Method: 6020
File ID: EL.051607.112512 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 16-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.100	0.400	-0.0138	1	U
Arsenic	0.100	0.400	0.0110	1	U
Cadmium	0.0500	0.200	-0.0398	1	U
Chromium	0.200	0.800	-0.0252	1	U
Copper	0.200	0.800	-0.0261	1	U
Lead	0.100	0.400	-0.0184	1	U
Antimony	0.100	0.400	0.127	1	F

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 768633
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063308

Login Number: L0705163 Run Date: 05/16/2007 Sample ID: WG240454-26

Instrument ID: ELAN-ICP Run Time: 19:39 Method: 6020

File ID: EL.051607.193947 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 16-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.100	0.400	-0.00970	1	U
Arsenic	0.100	0.400	0.0425	1	U
Cadmium	0.0500	0.200	-0.0370	1	U
Chromium	0.200	0.800	-0.113	1	U
Copper	0.200	0.800	-0.0180	1	U
Lead	0.100	0.400	-0.0149	1	U
Antimony	0.100	0.400	0.116	1	F

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 768633
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063309

Login Number: L0705163 Run Date: 05/16/2007 Sample ID: WG240454-28

Instrument ID: ELAN-ICP Run Time: 20:57 Method: 6020

File ID: EL.051607.205703 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 16-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.100	0.400	-0.00990	1	U
Arsenic	0.100	0.400	0.0303	1	U
Cadmium	0.0500	0.200	-0.0382	1	U
Chromium	0.200	0.800	-0.133	1	U
Copper	0.200	0.800	-0.0169	1	U
Lead	0.100	0.400	-0.0132	1	U
Antimony	0.100	0.400	0.126	1	F

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 768633
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063310

Login Number: L0705163 Run Date: 05/17/2007 Sample ID: WG240563-12
Instrument ID: ELAN-ICP Run Time: 10:35 Method: 6020
File ID: EL.051707.103505 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 17-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.100	0.400	-0.0388	1	U
Arsenic	0.100	0.400	0.000300	1	U
Cadmium	0.0500	0.200	-0.0374	1	U
Chromium	0.200	0.800	0.0527	1	U
Copper	0.200	0.800	-0.0235	1	U
Lead	0.100	0.400	-0.0293	1	U
Antimony	0.100	0.400	0.137	1	F

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 768633
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063311

Login Number: L0705163 Run Date: 05/17/2007 Sample ID: WG240563-14
Instrument ID: ELAN-ICP Run Time: 11:32 Method: 6020
File ID: EL.051707.113259 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 17-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.100	0.400	-0.0380	1	U
Arsenic	0.100	0.400	0.0291	1	U
Cadmium	0.0500	0.200	-0.0366	1	U
Chromium	0.200	0.800	0.0307	1	U
Copper	0.200	0.800	-0.0267	1	U
Lead	0.100	0.400	-0.0278	1	U
Antimony	0.100	0.400	0.107	1	F

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 768633
Report generated 05/18/2007 08:29

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

00063312

Login Number: L0705163 Run Date: 05/17/2007 Sample ID: WG240563-05
Instrument ID: ELAN-ICP Run Time: 09:49 Method: 6020
File ID: EL.051707.094955 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 17-MAY-07

Analyte		Expected	Found	%REC	LIMITS	Q
Silver		50	50.7	101	90 - 110	
Arsenic		50	50.7	101	90 - 110	
Cadmium		50	47.8	95.7	90 - 110	
Chromium		50	50.3	101	90 - 110	
Copper		50	51.9	104	90 - 110	
Lead		50	52.7	105	90 - 110	
Antimony		50	51.1	102	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 768629
Report generated 05/18/2007 08:29

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

00063313

Login Number: L0705163 Run Date: 05/16/2007 Sample ID: WG240454-05
Instrument ID: ELAN-ICP Run Time: 10:40 Method: 6020
File ID: EL.051607.104001 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 16-MAY-07

Analyte		Expected	Found	%REC	LIMITS	Q
Silver		50	50.4	101	90 - 110	
Arsenic		50	50.2	100	90 - 110	
Cadmium		50	53.8	108	90 - 110	
Chromium		50	50.7	101	90 - 110	
Copper		50	49.0	98.1	90 - 110	
Lead		50	50.5	101	90 - 110	
Antimony		50	51.5	103	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 768629
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063314

Login Number: L0705163 Run Date: 05/16/2007 Sample ID: WG240454-11
Instrument ID: ELAN-ICP Run Time: 11:18 Method: 6020
File ID: EL.051607.111846 Analyst: JYH
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 16-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Silver		50.0	50.5	ug/L	101	90 - 110		
Arsenic		50.0	49.8	ug/L	99.5	90 - 110		
Cadmium		50.0	51.2	ug/L	102	90 - 110		
Chromium		50.0	48.3	ug/L	96.6	90 - 110		
Copper		50.0	49.3	ug/L	98.7	90 - 110		
Lead		50.0	51.0	ug/L	102	90 - 110		
Antimony		50.0	49.5	ug/L	99.0	90 - 110		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 768632
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063315

Login Number: L0705163 Run Date: 05/16/2007 Sample ID: WG240454-25
Instrument ID: ELAN-ICP Run Time: 19:33 Method: 6020
File ID: EL.051607.193321 Analyst: JYH
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 16-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Silver		50.0	50.0	ug/L	99.9	90 - 110		
Arsenic		50.0	51.0	ug/L	102	90 - 110		
Cadmium		50.0	53.2	ug/L	106	90 - 110		
Chromium		50.0	45.0	ug/L	90.1	90 - 110		
Copper		50.0	47.7	ug/L	95.4	90 - 110		
Lead		50.0	50.9	ug/L	102	90 - 110		
Antimony		50.0	51.7	ug/L	103	90 - 110		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 768632
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063316

Login Number: L0705163 Run Date: 05/16/2007 Sample ID: WG240454-27
Instrument ID: ELAN-ICP Run Time: 20:50 Method: 6020
File ID: EL.051607.205038 Analyst: JYH
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 16-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Silver		50.0	51.2	ug/L	102	90 - 110		
Arsenic		50.0	49.2	ug/L	98.5	90 - 110		
Cadmium		50.0	55.9	ug/L	112	90 - 110		*
Chromium		50.0	42.7	ug/L	85.4	90 - 110		*
Copper		50.0	46.9	ug/L	93.8	90 - 110		
Lead		50.0	50.3	ug/L	101	90 - 110		
Antimony		50.0	52.8	ug/L	106	90 - 110		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 768632
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063317

Login Number: L0705163 Run Date: 05/17/2007 Sample ID: WG240563-11
Instrument ID: ELAN-ICP Run Time: 10:28 Method: 6020
File ID: EL.051707.102840 Analyst: JYH
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 17-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Silver		50.0	51.6	ug/L	103	90 - 110		
Arsenic		50.0	50.8	ug/L	102	90 - 110		
Cadmium		50.0	52.5	ug/L	105	90 - 110		
Chromium		50.0	51.0	ug/L	102	90 - 110		
Copper		50.0	52.5	ug/L	105	90 - 110		
Lead		50.0	51.1	ug/L	102	90 - 110		
Antimony		50.0	51.3	ug/L	103	90 - 110		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 768632
Report generated 05/18/2007 08:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063318

Login Number: L0705163 Run Date: 05/17/2007 Sample ID: WG240563-13
Instrument ID: ELAN-ICP Run Time: 11:26 Method: 6020
File ID: EL.051707.112633 Analyst: JYH
Workgroup (AAB#): WG240228 Cal ID: ELAN-I - 17-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Silver		50.0	52.0	ug/L	104	90 - 110		
Arsenic		50.0	49.9	ug/L	99.8	90 - 110		
Cadmium		50.0	51.0	ug/L	102	90 - 110		
Chromium		50.0	47.3	ug/L	94.6	90 - 110		
Copper		50.0	50.4	ug/L	101	90 - 110		
Lead		50.0	51.6	ug/L	103	90 - 110		
Antimony		50.0	52.3	ug/L	105	90 - 110		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 768632
Report generated 05/18/2007 08:29

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

00063319

Login number: L0705163 **Workgroup (AAB#):** WG240228
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG240454-09 **File ID:** EL.051607.110551 **Units:** ug/L
Sol. AB : WG240454-10 **File ID:** EL.051607.111219

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.116	NS	100	104	104	
Arsenic	NS	-0.0134	NS	100	102	102	
Cadmium	NS	0.0751	NS	100	116	116	
Chromium	NS	0.173	NS	100	96.5	96.5	
Copper	NS	0.295	NS	100	95.0	95.0	
Lead	NS	0.0936	NS	100	104	104	
Silver	NS	-0.00660	NS	100	98.0	98.0	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

00063320

Login number: L0705163 **Workgroup (AAB#):** WG240228
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG240563-09 **File ID:** EL.051707.101545 **Units:** ug/L
Sol. AB : WG240563-10 **File ID:** EL.051707.102213

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.107	NS	100	108	108	
Arsenic	NS	0.0149	NS	100	107	107	
Cadmium	NS	0.0670	NS	100	105	105	
Chromium	NS	0.225	NS	100	100	100	
Copper	NS	0.320	NS	100	102	102	
Lead	NS	0.110	NS	100	106	106	
Silver	NS	-0.0321	NS	100	98.7	98.7	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

CRI SAMPLE

00063321

Login Number: L0705163 Run Date: 05/17/2007 Sample ID: WG240563-08

Instrument ID: ELAN-ICP Run Time: 10:09 Prep Method: 3015

File ID: EL.051707.100916 Analyst: JYH Method: 6020

Workgroup (AAB#): WG240563 Matrix: Leachate Units: ug/L

Contract #: DACA56-94-D-0020 Cal ID: ELAN-ICP-17-MAY-2007 09:43

Analytes	Expected	Found	% Rec	Limits	Q
Cadmium, Leachable	0.200	0.204	102	50 - 150	

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 768627
Report generated 05/18/2007 08:30

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

00063323

Login Number: L0705163 **Date:** 03/06/2007

Insturment ID: ELAN-ICP **Method:** 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:

2.2.3 Metals CVAA Data (Mercury)

2.2.3.1 Summary Data

KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0705163

METHOD

Preparation: SW-846 7470A

Analysis: SW-846 7470A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG240257(7470A) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

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

Analyst: MMB,ED

Approved: 17-MAY-07
Maren Berry

LABORATORY REPORT

L0705163

00063327

05/18/07 15:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Biulding
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Diane Mever

Account Number: 2773
Work ID: LHAAP

P.O. Number: 200328

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
03SB03-01-SPLP	L0705163-01	7470A	1	05-MAY-07

Report Number: **L0705163**
Report Date : **May 18, 2007**

00063328

Sample Number: **L0705163-01**
Client ID: **03SB03-01-SPLP**
Matrix: **Leachate**
Workgroup Number: **WG240257**
Collect Date: **05/03/2007 14:00**
Sample Tag: **01**

PrePrep Method: **1312**
Prep Method: **METHOD**
Analytical Method: **7470A**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **HYDRA**
Prep Date: **05/11/2007 07:20**
Cal Date: **05/14/2007 14:16**
Run Date: **05/14/2007 14:35**
File ID: **HY.051407.143511**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury	7439-97-6		U	0.000200	0.000100

U Not detected at or above adjusted sample detection limit

2.2.3.2 QC Summary Data

Example Cold Vapor Mercury Calculations
Hydra AA Mercury Analyzer

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and five standards.

2.0 Calculating the concentration (C) of an element in water using data from run log and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to Volume (mL)	50
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
Cx = Concentration of element in ppb (ug/L)	0.125

3.0 Calculating the concentration (C) of an element in soil using data from prep log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Ws} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to volume (mL)	50
Ws = Aliquot weight (g)	0.5
D = Manual dilution factor	1
Cx = Concentration of element in ug/kg	10

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

1 Cx = Concentration calculated as received (wet basis)	10
Px = Percent solids of sample (%wt)	80
$Cdry$ = Dry weight of sample (ug/kg)	12.5

12.5 ug/kg = 0.0125 mg/kg

Mercury Digestion Log

Analyst(s): Rod
Date: 5/11/07
LCS: 4ml STD 19348
MS/MSD: 4ml STD 19348
Witness: NP
H_2SO_4 Lot #: COA 11777
$K2S_2O_8$ Lot #: ACT 11540
$KMNO_4$ Lot #: ACT 11582
HNO_3 Lot #: COA 12160
Digest Tube Lot #: COA 12258
Aqua Regia: NA
Earliest Sample Due Date: 5/18/07
ICV / CCV: STD 19350
Stds: 0, 0.2, 1, 2, 5, 10: STD 19351 & 19356

Box: C7

Digestion Work Group: WG 240102

ME404 Revision # 10 - Method 7470A-Water
ME405 Revision # ____ - Method 7471A-Soil

Hot Block Temperature at start: 94.9 @ 0720

Hot Block Temperature at end: 94.9 @ 9:20

Relinquished By: RR
Digest Received By: [illegible] Date: 5/11/07

	KEMRON #	Initial Wt/Vol	Final Volume	Comments	Due Date
1	MBW	40ml	40ml	-02	
2	LCSW			-03	
3	SPIP BLK S/G			WG 239965 @ 1600	
4	05-163-01			1	5/18
5	05-205-01				5/22
6	-02			-01	
7	-02MS	36ml		-04	
8	-02MSD	1		-05	
9	-03	40ml			
10	-04				
11	-05				
12	05-206-01				5/22
13	05-208-01				5/22
14	05-261-02			MPDES	5/21
15	-04			1	
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

5/11/07

Comments: _____

Primary Review: 5/11/07 Secondary Review: Vicki Wells 5/11/07

KEMRON ENVIRONMENTAL SERVICES

TCLP Non-Volatile

Analyst(s): Rac
Date: 05-09-07

Analyst/Date		Analyst/Date	
Rac 5-09-07		Rac 5-10-07	
Time On	Temp On °C	Time Off	Temp Off °C
1600	23	0800	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
G 21	05-163-01	ME 8270	1312	SFR-173	S/S	100		✓	100.03	2000
G 14	02	↓	↓	↓	↓	↓		↓	100.04	↓
G 22	03	↓	↓	↓	↓	↓		↓	100.00	↓
D	04	ME	↓	↓	↓	↓		↓	100.00	↓
D	05	↓	↓	↓	↓	↓		↓	100.02	↓
D	06	↓	↓	↓	↓	↓		↓	100.01	↓
G-3	07	8082	↓	↓	↓	↓		↓	100.05	↓
G-9	08	8270	↓	↓	↓	↓		↓	100.04	↓
G-29	09	↓ 8082	↓	↓	↓	↓		↓	100.00	↓
N/A	FBLK	MS ↓ ↓	↓	↓	N/A	N/A		↓	2000	↓

Rac 5-09-07

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

KEMRON Environmental Services

Instrument Run Log

00063333

Instrument: HYDRA Dataset: 051407B.PRN

Analyst1: KHR Analyst2: ED

Method: 7470A SOP: 404 Rev: 10

Maintenance Log ID: 19108

Calibration Std: STD19356 ICV/CCV Std: STD19350 Post Spike: STD19356

ICSA: N/A ICSAB: N/A

Workgroups: WG240257

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.051407.140829	WG240353-01	Calibration Point		1		05/14/07 14:08
2	HY.051407.141007	WG240353-02	Calibration Point		1		05/14/07 14:10
3	HY.051407.141145	WG240353-03	Calibration Point		1		05/14/07 14:11
4	HY.051407.141323	WG240353-04	Calibration Point		1		05/14/07 14:13
5	HY.051407.141505	WG240353-05	Calibration Point		1		05/14/07 14:15
6	HY.051407.141643	WG240353-06	Calibration Point		1		05/14/07 14:16
7	HY.051407.141921	WG240353-07	Initial Calibration Verification		1		05/14/07 14:19
8	HY.051407.142059	WG240353-08	Initial Calib Blank		1		05/14/07 14:20
9	HY.051407.142256	WG240353-09	CCV		1		05/14/07 14:22
10	HY.051407.142431	WG240353-10	CCB		1		05/14/07 14:24
11	HY.051407.142642	WG240102-02	Method/Prep Blank	40/40	1		05/14/07 14:26
12	HY.051407.142831	WG240102-03	Laboratory Control S	40/40	1		05/14/07 14:28
13	HY.051407.143007	L0705261-02	CATEGORICAL/COMP	40/40	1		05/14/07 14:30
14	HY.051407.143155	L0705261-04	MANHOLE/COMP	40/40	1		05/14/07 14:31
15	HY.051407.143332	WG239969-01	Fluid Blank		1		05/14/07 14:33
16	HY.051407.143511	L0705163-01	03SB03-01-SPLP	40/40	1		05/14/07 14:35
17	HY.051407.143710	WG240257-01	Post Digestion Spike		1	L0705163-01	05/14/07 14:37
18	HY.051407.143910	L0705205-01	MW-3	40/40	1		05/14/07 14:39
19	HY.051407.144048	WG240102-01	Reference Sample		1		05/14/07 14:40
20	HY.051407.144228	WG240102-04	Matrix Spike	36/40	1		05/14/07 14:42
21	HY.051407.144439	WG240353-11	CCV		1		05/14/07 14:44
22	HY.051407.144617	WG240353-12	CCB		1		05/14/07 14:46
23	HY.051407.144817	WG240102-05	Matrix Spike Duplica	36/40	1		05/14/07 14:48
24	HY.051407.145015	L0705205-03	MW-5	40/40	1		05/14/07 14:50
25	HY.051407.145226	L0705205-04	MW-1R	40/40	1		05/14/07 14:52
26	HY.051407.145404	L0705205-05	MW-2	40/40	1		05/14/07 14:54
27	HY.051407.145551	L0705206-01	NORTH TANK	40/40	1		05/14/07 14:55
28	HY.051407.145727	WG240257-02	Post Digestion Spike		1	L0705206-01	05/14/07 14:57
29	HY.051407.145918	L0705208-01	SOUTH TANK	40/40	1		05/14/07 14:59
30	HY.051407.150058	WG240353-13	CCV		1		05/14/07 15:00
31	HY.051407.150236	WG240353-14	CCB		1		05/14/07 15:02

Page: 1

Approved: May 16, 2007

KEMRON Environmental Services
Data Checklist

00063334

Date: 14-MAY-2007
Analyst: MMB
Analyst: ED
Method: 7470A
Instrument: HYDRA
Curve Workgroup: WG240353
Runlog ID: 16158
Analytical Workgroups: WG240257

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	05-163,205,206,208
Client Forms	X
Level X	05-,205,206,208
Level 3	05-163
Level 4	
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	MMB
Secondary Reviewer	LSB
Comments	

Primary Reviewer:
15-MAY-2007
Maren Berry

Secondary Reviewer:
16-MAY-2007
Leslie Bricker

Generated: MAY-16-2007 08:22:42

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

00063335

Analytical Method: 7470A AAB#: WG240257
Login Number: L0705163

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
03SB03-01-SPLP	05/03/07	05/05/07	05/11/07	28	7.72	05/14/07	28	3.30	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 11/20/2006
Version 1.5 PDF File ID: 766625
Report generated 05/15/2007 12:47

KEMRON Environmental Services

METHOD BLANK SUMMARY

00063336

Login Number:	L0705163	Work Group:	WG240257
Blank File ID:	HY.051407.142642	Blank Sample ID:	WG240102-02
Prep Date:	05/11/07 07:20	Instrument ID:	HYDRA
Analyzed Date:	05/14/07 14:26	Method:	7470A
Analyst:	KHR		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG240102-03	HY.051407.142831	05/14/07 14:28	01
03SB03-01-SPLP	L0705163-01	HY.051407.143511	05/14/07 14:35	01

KEMRON FORMS - Modified 01/31/2007
Version 1.5 PDF File ID: 766626
Report generated 05/15/2007 12:47

KEMRON Environmental Services

METHOD BLANK REPORT

00063337

Login Number: L0705163 Prep Date: 05/11/07 07:20 Sample ID: WG240102-02
Instrument ID: HYDRA Run Date: 05/14/07 14:26 Prep Method: METHOD
File ID: HY.051407.142642 Analyst: KHR Method: 7470A
Workgroup (AAB#): WG240257 Matrix: Leachate Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: HYDRA-14-MAY-07

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Mercury	0.000100	0.000200	0.000100	1	U

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

KEMRON FORMS - Modified 12/07/2006
Version 1.5 PDF File ID: 766627
Report generated 05/15/2007 12:47

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

00063338

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240102-03
Instrument ID: HYDRA Run Time: 14:28 Prep Method: METHOD
File ID: HY.051407.142831 Analyst: KHR Method: 7470A
Workgroup (AAB#): WG240257 Matrix: Leachate Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: HYDRA-14-MAY-07

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00365	91.3	85 - 115	

KEMRON FORMS - Modified 12/15/2006
Version 1.5 PDF File ID: 766628
Report generated 05/15/2007 12:47

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

00063339

Loginnum:L0705163 Cal ID: HYDRA- Worknum:WG240257
Instrument ID:HYDRA Contract #:DACA56-94-D-0020 Method:7470A
Parent ID:WG240102-01 File ID:HY.051407.144048 Dil:1 Matrix:WATER
Sample ID:WG240102-04 MS File ID:HY.051407.144228 Dil:1 Units:mg/L
Sample ID:WG240102-05 MSD File ID:HY.051407.144817 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.00444	0.00402	90.5	0.00444	0.00418	94.0	3.79	85 - 115	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 12/08/2006
Version 1.5 PDF File ID: 766629
Report generated 05/15/2007 12:47

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

00063340

Sample Login ID: L0705163 **Worknum:** WG240257
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG240257-01 **File ID:** HY.051407.143710 **Dil:** 1 **Units:** ug/L
Sample ID: L0705163-01 **File ID:** HY.051407.143511 **Dil:** 1 **Matrix:** Leachate

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	0.948		0	U	1	94.8	85 - 115	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

KEMRON FORMS - Modified 04/20/2007 - POST_SPIKE
Version 2.0 PDF File ID: 766624
Report generated 05/15/2007 12:47

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

00063341

Login Number: L0705163
Analytical Method: 7470A
ICAL Worknum: WG240353

Workgroup (AAB#): WG240257
Instrument ID: HYDRA
Initial Calibration Date: 05/14/2007 14:16

Analyte	WG240353-01		WG240353-02		WG240353-03		WG240353-04		WG240353-05		WG240353-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	-1501	0.200	5762	1.00	32981	2.00	65060	5.00	153615	10.0	303258

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 02/02/2007
Version 1.5 PDF File ID: 766630
Report generated 05/15/2007 12:47

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

00063342

Login Number: L0705163
Analytical Method: 7470A
ICAL Worknum: WG240353

Workgroup (AAB#): WG240257
Instrument ID: HYDRA
Initial Calibration Date: 05/14/2007 14:16

Analyte	R	Q
Mercury	0.9998	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 02/02/2007
Version 1.5 PDF File ID: 766630
Report generated 05/15/2007 12:47

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

00063343

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240353-08
Instrument ID: HYDRA Run Time: 14:20 Method: 7470A
File ID: HY.051407.142059 Analyst: KHR Units: ug/L
Workgroup (AAB#): WG240257 Cal ID: HYDRA - 14-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-.077	1	U

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 10/02/2006
Version 1.5 PDF File ID: 766632
Report generated 05/15/2007 12:48

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063344

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240353-10
Instrument ID: HYDRA Run Time: 14:24 Method: 7470A
File ID: HY.051407.142431 Analyst: KHR Units: ug/L
Workgroup (AAB#): WG240257 Cal ID: HYDRA - 14-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.102	1	F

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 766634
Report generated 05/15/2007 12:48

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063345

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240353-12
Instrument ID: HYDRA Run Time: 14:46 Method: 7470A
File ID: HY.051407.144617 Analyst: KHR Units: ug/L
Workgroup (AAB#): WG240257 Cal ID: HYDRA - 14-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.0780	1	U

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 766634
Report generated 05/15/2007 12:48

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

00063346

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240353-14
Instrument ID: HYDRA Run Time: 15:02 Method: 7470A
File ID: HY.051407.150236 Analyst: KHR Units: ug/L
Workgroup (AAB#): WG240257 Cal ID: HYDRA - 14-MAY-07

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.0870	1	U

U = Result is less than MDL
F = Result is between MDL and RL
* = Result is above RL

KEMRON FORMS - Modified 09/27/2006
Version 2.0 PDF File ID: 766634
Report generated 05/15/2007 12:48

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

00063347

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240353-07
Instrument ID: HYDRA Run Time: 14:19 Method: 7470A
File ID: HY.051407.141921 Analyst: KHR Units: ug/L
Workgroup (AAB#): WG240257 Cal ID: HYDRA - 14-MAY-07

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	1.89	94.5	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 766631
Report generated 05/15/2007 12:47

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063348

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240353-09
Instrument ID: HYDRA Run Time: 14:22 Method: 7470A
File ID: HY.051407.142256 Analyst: KHR
Workgroup (AAB#): WG240257 Cal ID: HYDRA - 14-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00201	mg/L	101	80 - 120		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 766633
Report generated 05/15/2007 12:48

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063349

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240353-11
Instrument ID: HYDRA Run Time: 14:44 Method: 7470A
File ID: HY.051407.144439 Analyst: KHR
Workgroup (AAB#): WG240257 Cal ID: HYDRA - 14-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00199	mg/L	99.5	80 - 120		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 766633
Report generated 05/15/2007 12:48

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

00063350

Login Number: L0705163 Run Date: 05/14/2007 Sample ID: WG240353-13
Instrument ID: HYDRA Run Time: 15:00 Method: 7470A
File ID: HY.051407.150058 Analyst: KHR
Workgroup (AAB#): WG240257 Cal ID: HYDRA - 14-MAY-07

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00203	mg/L	102	80 - 120		

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 12/11/2006 - (CCV)
Version 1.3 PDF File ID: 766633
Report generated 05/15/2007 12:48

3.0 Attachments

Kemron Environmental Services
Analyst Listing
May 18, 2007

AJF – AMANDA J. FICKIESEN	ALB – ANNIE L. BOCK	ARA – ADRIAN R. ACHTERMANN
ASP – AARON S. PETRIE	BRG – BRENDA R. GREGORY	CAA – CASSIE A. AUGENSTEIN
CAF – CHERYL A. FLOWERS	CAK – CHERYL A. KOELSCH	CEB – CHAD E. BARNES
CLC – CHRYS L. CRAWFORD	CLS – CARA L. STRICKLER	CLW – CHARISSA L. WINTERS
CM – CHARLIE MARTIN	CMS – CRYSTAL M. STEPHENS	CPD – CHAD P. DAVIS
CSH – CHRIS S. HILL	DD – DIANE M. DENNIS	DDE – DEBRA D. ELLIOTT
DEL – DON E. LIGHTFRITZ	DEV – DAVID E. VANDENBERG	DGB – DOUGLAS G. BUTCHER
DIH – DEANNA I. HESSON	DLB – DAVID L. BUMGARNER	DLP – DOROTHY L. PAYNE
DLR – DIANNA L. RAUCH	DR – DEANNA ROBERTS	DRP – DAVE R. PITZER
DSF – DEBRA S. FREDERICK	DSM – DAVID S. MOSSOR	DST – DENNIS S. TEPE
ECL – ERIC C. LAWSON	ED – EMILY E. DECKER	ERE – ERIN R. ELDER
FJB – FRANCES J. BOLDEN	HAV – HEMA VILASAGAR	HJR – HOLLY J. REED
JAB – JUANITA A. BECKER	JAL – JOHN A. LENT	JKT – JANE K. THOMPSON
JLS – JANICE L. SCHIMMEL	JNB – JOSHUA N. BOOTH	JWR – JOHN W. RICHARDS
JWS – JACK W. SHEAVES	JYH – JI Y. HU	KCZ – KEVIN C. ZUMBRO
KEB – KATHRYN E. BARNES	KHR – KIM H. RHODES	KRA – KATHY R. ALBERTSON
LKN – LINDA K. NEDEFF	LSB – LESLIE S. BUCINA	MDA – MIKE D. ALBERTSON
MDC – MICHAEL D. COCHRAN	MES – MARY E. SCHILLING	MKZ – MARILYN K. ZUMBRO
MLR – MARY L. ROCHOTTE	MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR
MSW – MATT S. WILSON	NJB – NATALIE J. BOOTH	PJM – PAUL J. MILLER
RAH – ROY A. HALSTEAD	RB – ROBERT BUCHANAN	REK – ROBERT E. KYER
RNP – RICK N. PETTY	RWC – RODNEY W. CAMPBELL	SLM – STEPHANIE L. MOSSBURG
SLP – SHERI L. PFALZGRAF	SMH – SHAUNA M. HYDE	TMB – TIFFANY M. BAILEY
TMM – TAMMY M. MORRIS	VC – VICKI COLLIER	WFM – WALTER F. MARTIN

KEMRON Environmental Services

List of Valid Qualifiers

May 18, 2007

00063353

Qualkey: STD

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

*****Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound an are matrix dependent.

00063354

B2199

Shaw® Shaw Environmental, Inc.

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Houston, TX 77042 (713) 996-4400

CHAIN-OF-CUSTODY

No. 10440

Laboratory Name: KEMRON Address: 156 STARLITE DR. MARIETTA, OH. 45750 Contact: STEPHANIE MOSSBERG

Project Name: LHAAP Project Location: KARNACK, TX.

Project No.: 117591 Project Contact: SUSAN OLLER Project Telephone No.: 713-996-4513 ~~PRAVEEN SRIVASTAV~~

Point of contact: SUSAN OLLER Project Manager/Supervisor: PRAVEEN SRIVASTAV

Telephone No.: 713-996-4513

Analysis and Method Desired (Indicate separate containers)

Item No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location	Number of Containers	SPLP metals 6020 Sb, As, Cd, Cr, Co, Pb, Hg 7470A	SPLP SVOC 8270C	SPLP Silver 6020	SPLP Beryllium, Lead 6020	SPLP PCB 8082			Remarks
1	03SB03-01-SPLP	5/3/07	2:00			Soil	SOIL, SITE 03	2	✓	✓						
2	06SB01-01-SPLP	5/4/07	7:30			Soil	SOIL, SITE 06	1		✓						
3	07SB04-01-SPLP	5/4/07	8:10			Soil	SOIL, SITE 07	1		✓						
4	07SB06-01-SPLP	5/4/07	9:45			Soil	SOIL, SITE 07	1			✓					
5	51SB02-01-SPLP	5/4/07	11:00			Soil	SOIL, SITE 51	1			✓					
6	55SB03-01-SPLP	5/4/07	12:40			Soil	SOIL, SITE 55	1				✓				
7	1004SS007-SPLP	5/4/07	1:17			Soil	SOIL, SITE 66	1					✓			
8	68SB01-01-SPLP	5/4/07	2:05			Soil	SOIL, SITE 68	1		✓						
9	64SB03-01-SPLP	5/4/07	2:50			Soil	SOIL, SITE 64	2		✓			✓			
10																

Transfers Relinquished By (Signature)	Date/Time	Transfers Accepted By (Signature)	Date/Time
Scott Beesinger	5/4/07 4:00		
		Laboratory: Brenda Gregory	5/5/07 1020

Special Instructions: C/C sealed & intact, Cooler temp 2

UPS ~~FedEx~~ Airbill No.: 1Z66V7254497890271

Sampler's Signature: Scott Beesinger

TAT: ✓ Standard ____ Rush Due: ___ Seals Intact? ____ Y ____ N Received Good Condition ____ Y ____ N ____ Cold

Stored in locked cooler over weekend BG

White - Lab Copy Canary - Field Copy Pink - File Copy

SAMPLE RECEIPT FORM

00063355
156 STARLITE DRIVE
MARIETTA, OH
45750
(740) 373-4071

Date: 5507 Client: SHAW-TX

Shipped By: ( ) Fed-Ex (X) UPS ( )DHL ( ) KEMRON ( ) Client ( ) Other

Opened By: BLG

Logged By: BLG Login # L07 051163

IR Temp Gun: (X) ( )G

COOLER INFORMATION

Number	Cooler ID	Temp °C	Airbill#	COC#	Other
1	0844	2	1Z16V7254497890271		
2					
3					
4					
5					
6					

Were all coolers sealed?	(Y)	N	N/A
Were custody seals used on all coolers?	(Y)	N	N/A
Were custody seals intact?	(Y)	N	N/A
Was visible ice present?	(Y)	N	N/A
Were all coolers in the temperature range of 2-6C? (>6C*)	(Y)	N	N/A
Were the samples frozen?*	Y	(N)	N/A
Were COC papers provided?	(Y)	N	N/A
Were all sample containers intact?*	(Y)	N	N/A
Were all sample labels intact?	(Y)	N	N/A
Were all sample labels legible?*	(Y)	N	N/A
Did all sample labels match the COC?*	(Y)	N	N/A
Was the label information complete?*	(Y)	N	N/A
Were the correct containers used?*	(Y)	N	N/A
Were the correct preservatives added to water samples?*	Y	N	(N/A)
Was the pH tested on preserved water samples?	Y	N	(N/A)
Were pH ranges acceptable?*	Y	N	(N/A)
Was sufficient amount of sample provided?*	(Y)	N	N/A
Were bubbles present in VOA samples?*	Y	N	(N/A)
Were COC's signed and dated?	(Y)	N	N/A
Did samples arrive before hold time expired?*	(Y)	N	N/A
Are discrepancy forms attached?	Y	N	(N/A)

**Requires a discrepancy form*

Comments:_____

CRF #1
Revised 8/22/03

KEMRON Environmental Services
Internal Chain of Custody Report

00063356

Login: L0705163
Account: 2773
Project: 2773.025
Samples: 9
Due Date: 18-MAY-2007

Samplenum	Container ID	Products
L0705163-07	337829	8082-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:22	RWC	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:22	RWC	

Samplenum	Container ID	Products
L0705163-01	337836	HG-SPLP SB-MS-SPLP AS-MS-SPLP PB-MS-SPLP CD-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:26	RWC	

Samplenum	Container ID	Products
L0705163-08	337059	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:57	BRG	RWC

Samplenum	Container ID	Products
L0705163-09	337060	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:56	BRG	RWC

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:56	BRG	RWC

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

KEMRON Environmental Services
Internal Chain of Custody Report

00063357

Login: L0705163
Account: 2773
Project: 2773.025
Samples: 9
Due Date: 18-MAY-2007

Samplenum	Container ID	Products
L0705163-02	337053	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:56	BRG	RWC

Samplenum	Container ID	Products
L0705163-04	337837	AG-MS-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:26	RWC	

Samplenum	Container ID	Products
L0705163-06	337839	BE-AX-SPLP PB-MS-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:26	RWC	

Samplenum	Container ID	Products
L0705163-07	337058	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:56	BRG	RWC

Samplenum	Container ID	Products
L0705163-06	337057	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:56	BRG	RWC

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

KEMRON Environmental Services
Internal Chain of Custody Report

00063358

Login: L0705163
Account: 2773
Project: 2773.025
Samples: 9
Due Date: 18-MAY-2007

Samplenum	Container ID	Products
L0705163-02	337832	827-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Samplenum	Container ID	Products
L0705163-03	337833	827-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Samplenum	Container ID	Products
L0705163-09	337835	827-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Samplenum	Container ID	Products
L0705163-05	337838	AG-MS-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:26	RWC	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

KEMRON Environmental Services
Internal Chain of Custody Report

00063359

Login: L0705163
Account: 2773
Project: 2773.025
Samples: 9
Due Date: 18-MAY-2007

Samplenum	Container ID	Products
L0705163-05	337056	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:56	BRG	RWC

Samplenum	Container ID	Products
L0705163-01	337052	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:57	BRG	RWC

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:57	BRG	RWC

Samplenum	Container ID	Products
L0705163-01	337831	827-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Samplenum	Container ID	Products
L0705163-08	337834	827-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:24	RWC	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

KEMRON Environmental Services
Internal Chain of Custody Report

00063360

Login: L0705163
Account: 2773
Project: 2773.025
Samples: 9
Due Date: 18-MAY-2007

Samplenum	Container ID	Products
L0705163-04	337055	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:57	BRG	RWC

Samplenum	Container ID	Products
L0705163-03	337054	SPLP-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	07-MAY-2007 11:24	BRG	
2	PREP	W1	TCL	07-MAY-2007 13:16	RWC	BRG
3	STORE	TCL	A1	10-MAY-2007 06:57	BRG	RWC

Samplenum	Container ID	Products
L0705163-09	337830	8082-SPLP

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:22	RWC	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			10-MAY-2007 06:22	RWC	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

WORKGROUP SUMMARY BY METHOD

WORKGROUP SUMMARY BY METHOD

Analysis: Metals Analysis
Extraction Method: 3015
Workgroup: WG240028

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-01	03SB03-01-SPLP		05/10/07 11:30			MICROWAVE	VC
L0705163-04	07SB06-01-SPLP		05/10/07 11:30			MICROWAVE	VC
L0705163-05	51SB02-01-SPLP		05/10/07 11:30			MICROWAVE	VC
L0705163-06	55SB03-01-SPLP		05/10/07 11:30			MICROWAVE	VC

Analysis: Metals Analysis
Extraction Method: 3005A
Workgroup: WG240098

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-06	55SB03-01-SPLP		05/11/07 06:25			HOT BLOCK	REK

Analysis: Mercury
Extraction Method: METHOD
Workgroup: WG240102

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-01	03SB03-01-SPLP		05/11/07 07:20			HOT BLOCK	REK

Analysis: Semivolatile Organics - SPLP
Extraction Method: 3510C
Workgroup: WG240111

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-01	03SB03-01-SPLP		05/11/07 09:30			SEP-FUNNEL	CAF
L0705163-02	06SB01-01-SPLP		05/11/07 09:30			SEP-FUNNEL	CAF
L0705163-03	07SB04-01-SPLP		05/11/07 09:30			SEP-FUNNEL	CAF
L0705163-08	68SB01-01-SPLP		05/11/07 09:30			SEP-FUNNEL	CAF
L0705163-09	64SB03-01-SPLP		05/11/07 09:30			SEP-FUNNEL	CAF

Analysis: Polychlorinated Biphenyls - SPLP
Extraction Method: 3510C
Workgroup: WG240128

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-07	1004SS007-SPLP		05/11/07 13:00			SEP-FUNNEL	CPD
L0705163-09	64SB03-01-SPLP		05/11/07 13:00			SEP-FUNNEL	CPD

Analysis: Polychlorinated Biphenyls - SPLP
Analytical Method: 8082
Workgroup: WG240216

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-07	1004SS007-SPLP		05/11/07 13:00	05/14/07 11:44	01	HP9	ECL
L0705163-09	64SB03-01-SPLP		05/11/07 13:00	05/14/07 12:02	01	HP9	ECL

Analysis: Metals Analysis
Analytical Method: 6020
Workgroup: WG240228

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-01	03SB03-01-SPLP		05/10/07 11:30	05/16/07 20:11	01	ELAN-ICP	JYH
L0705163-01	03SB03-01-SPLP		05/10/07 11:30	05/17/07 11:07	02	ELAN-ICP	JYH
L0705163-04	07SB06-01-SPLP		05/10/07 11:30	05/16/07 20:18	01	ELAN-ICP	JYH
L0705163-05	51SB02-01-SPLP		05/10/07 11:30	05/16/07 20:24	01	ELAN-ICP	JYH
L0705163-06	55SB03-01-SPLP		05/10/07 11:30	05/16/07 20:31	01	ELAN-ICP	JYH

Analysis: Mercury
Analytical Method: 7470A
Workgroup: WG240257

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-01	03SB03-01-SPLP		05/11/07 07:20	05/14/07 14:35	01	HYDRA	KHR

WORKGROUP SUMMARY BY METHOD

00063364

Analysis: Semivolatile Organics - SPLP
Analytical Method: 8270C
Workgroup: WG240262

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-01	03SB03-01-SPLP		05/11/07 09:30	05/11/07 17:15	01	HPMS5	ASP
L0705163-02	06SB01-01-SPLP		05/11/07 09:30	05/11/07 17:49	01	HPMS5	ASP
L0705163-03	07SB04-01-SPLP		05/11/07 09:30	05/11/07 18:22	01	HPMS5	ASP
L0705163-08	68SB01-01-SPLP		05/11/07 09:30	05/11/07 18:56	01	HPMS5	ASP
L0705163-09	64SB03-01-SPLP		05/11/07 09:30	05/11/07 19:30	01	HPMS5	ASP

Analysis: Metals Analysis
Analytical Method: 6010B
Workgroup: WG240269

Lab ID	Client ID	Tclp Date	Prep Date	Analysis Date	Tag	Inst Id	Analyst
L0705163-06	55SB03-01-SPLP		05/11/07 06:25	05/14/07 15:33	01	PE-ICP2	KHR

LONGHORN ARMY AMMUNITION PLANT
RESTORATION ADVISORY BOARD
Karnack, Texas
(479) 635-0110

AGENDA

DATE:	Tuesday, December 11, 2007
TIME:	6:30 – 7:30 PM
PLACE:	Karnack Community Center, Karnack, Texas

06:30 Welcome {RMZ & PF}

06:35 Open items {RMZ}

06:40 Defense Environmental Restoration Program (DERP) Performance Based Contract (PBC) Update {Shaw}
- Groundwater Treatment Plant (GWTP) Update
- 5-Year Review Report for LHAAP-12, 16, and 18/24
- Ecological Risk Assessment Status
- Documents Status/ Environmental Sites
- Perimeter Well Monitoring

06:50 DERP Total Environmental Restoration Contract Update {Shaw}
- Documents Status/ Environmental Sites
- Proposed Plans, LHAAP-08, 32, 37, 67, 48, 53
- Site 59 Status
- Site 37 Status

07:00 Military Munitions Response Program (MMRP) Update {USACE}

07:10 Programmatic issues

07:25 Other Environmental Restoration Issues/Concerns {RMZ)

07:30 Adjourn {RMZ}

Shaw® Shaw Environmental, Inc.

Subject: **Draft Final Minutes, Quarterly Restoration Advisory Board (RAB) Meeting, Longhorn Army Ammunition Plant (LHAAP)**

Location of Meeting: Karnack Community Center, Karnack, Texas

Date of Meeting: **December 11, 2007, 6:30 – 07:30 PM**

Meeting Participants:

LHAAP/BRAC:	Rose M. Zeiler
USACE-Tulsa:	Cliff Murray, John R. Lambert
USAEC:	Golden "Bill" Davis
USFWS:	Mark Williams
Shaw Environmental:	Praveen Srivastav, Dave Cobb
USEPA Region 6:	Stephen Tzhone
TCEQ:	Fay Duke
Community:	**RAB Co-Chair:** Paul Fortune; **RAB:** Nigel Shivers, Tom Walker, Tony Novak, Judith Johnson; Jay Webb

An agenda for the meeting was distributed prior to the meeting.

Welcome – Paul Fortune and Rose Zeiler

Paul Fortune called the meeting to order. He read a letter to the RAB from Shirley Shivers. Shirley has resigned her position as a RAB member because of other commitments.

The draft final minutes from the September 2007 meeting were distributed prior to the meeting. No comments or changes were made to the minutes.

Open Items – Rose Zeiler
No items were discussed.

Defense Environmental Restoration Program (DERP) Performance Based Contract (PBC) Update–Dave Cobb

Groundwater Treatment Plant (GWTP) Update
Operations at the GWTP were normal for the past quarter.

5-Year Review Report for LHAAP-12, -16, and 18/24
Document is pending the resolution of comments and will be finalized shortly.

Perimeter Well Monitoring
Perimeter well sampling for perchlorate was completed in August 2007. Laboratory results obtained from sampling wells 133 and 134 were less than laboratory detection limits. The annual creek sampling is being conducted this month (December). Results from that sampling event will be available at the next RAB meeting.

Document Status/Environmental Sites
A document status table was provided.

Milestones in 2008—Praveen Srivastav
Milestones for 2008 were discussed briefly. Completion of Records of Decision (ROD) documents for several sites is scheduled for the coming year. An explanation about the various CERCLA documents was provided. A ROD constitutes an agreement between the Army and regulators to implement a selected remedy at a site. A remedial action comes after a ROD is completed and approved. A remedial design needs to be approved before the remedial action is conducted. It is expected that approximately 20 sites will be in the remedial action phase by 2009.

DERP Total Environmental Restoration Contract (TERC) Update –Praveen Srivastav

Praveen Srivastav discussed the highlights of the Document Status Table for the TERC contract.

LHAAP-12 is in the Remedial Action Operations (RAO) phase and sampling is scheduled for this month (December). (Since this site is in the RAO phase, it will be reported under the PBC contract in the future.)

Proposed Plans for sites 08, 32, 37/67, 48/53 are currently being finalized. The Army is planning to conduct a public meeting for the proposed plans during the last week of January 2008.

Draft RODs for LHAAP-32, LHAAP-37/67, and LHAAP-48/53 are currently in review with the Army.

Pumping tests were recently conducted at LHAAP-37 and LHAAP-67 to categorize groundwater.

Tony Novak asked if the whole installation would be transferred by March 2008. Rose Zeiler indicated that the Army will transfer at any time, but that Tony should ask the USFWS whether they are ready to accept it. Steve Tzhone indicated that 7,000 acres have already been transferred. Tony said that he thought visitors would be able to come in by March 2008. Rose said that USFWS is responsible for access to the Refuge and that he should direct his question to USFWS.

Paul Fortune asked Rose whether the Army had intended the USFWS to take over the care of the landfills after transfer and if there is an issue with it. Rose indicated that there is an issue with transfer of maintenance responsibilities and that it has been raised to a higher level up the chain. The USFWS is asking for compensation from Army to take on the maintenance responsibilities, such as mowing and maintaining the fences and signs. The Army's expectation was that there would be no compensation. Rose explained that this was the case at Fort Chaffee, where the land was transferred to the public at no cost and the landfill maintenance responsibilities, such as mowing and sign maintenance, are being conducted by them at no cost to the Army. Jay Webb asked if any money had been set aside for the maintenance at Longhorn. John Lambert indicated that a few years of maintenance are covered under contract, but that no money was budgeted beyond that. Rose indicated that a higher level decision will have to be made to set money aside or not. At the present time, LHAAP-12 is under the PBC until 2015 for maintenance. Paul Fortune asked if there is a problem after USFWS takes over, would the USFWS be liable. Rose indicated that the Army retains liability and is still responsible for repairing any major damage or failure of the remedy. Mark Williams said that his headquarters (chief of refuge) has said that USFWS will not accept any land from the Army where maintenance is required in perpetuity. Mark also noted that the language in the MOA refers to the Refuge taking on those actions that are within the "normal course of refuge operation." The USFWS doesn't have any money allocated by Congress to conduct maintenance activities. Rose noted that the Refuge undertakes mowing and sign maintenance currently and that the Refuge installed signs next to Army signs throughout the Refuge and that this would be considered the normal course of refuge maintenance. The language in the MOA, according to the Army's interpretation, is that the USFWS will take over activities consistent with refuge maintenance. Since this issue has not been resolved, it has gone to another level for resolution.

Note: Excerpt from the signed April 2004 Transfer MOA not presented during meeting but provided here for the convenience of all parties:

C. Land Use Controls. *LUCs may be required for certain portions of the Transferred Parcels. FWS agrees to comply with LUCs imposed on the property and assist Army by monitoring, maintaining, and enforcing those LUCs that fall within the normal course of refuge management. Following consultation with the Army, FWS will determine what falls within the normal course of refuge management.*

DERP Corps of Engineers Update – USACE

Military Munitions Response Program (MMRP) Update – John Lambert
John Lambert said that the Action Memorandum for the removal action was signed in September 2007. Clearance will be conducted at LHAAP-27 to depth. The Removal Action Work Plan and the Explosive Safety Submission (ESS) are currently being prepared. These items will have to be completed prior to initiating field work.

Jay Webb asked if this work would involve a burn. John Lambert replied in the affirmative. The Army may have to request a conditional approval of the ESS for the burn to occur in January/February, 2008. Mark Williams said that the burning season is November through March. After March, the next opportunity to burn is in late June. John said that the contractor

will work with USFWS to coordinate the burn. People from USACE Huntsville District will manage the work. Mark said the USFWS would be happy to assist.

Paul Fortune asked when the Army planned to have this action completed and how many acres would be involved. John responded that this phase of the remediation would be completed in 2008 and that 160 acres were involved. He indicated that LHAAP-53 did not require any action and clearance was recommended at LHAAP-27 and LHAAP-54 only.

Other Environmental Restoration Issues/Concerns - Rose Zeiler

Tony Novak asked if all the non-transferred land will be offered to the USFWS in the January/February 2008 timeframe. Rose replied that she wasn't sure what Tony was referring to, but perhaps he is thinking of the permit and noted that the permit is in USFWS hands.

She discussed the pits and hazards mitigation being done by the Army. She indicated that she is conducting an inspection tomorrow and is aware that there are some pits with water still present in the Production Area. She will be reporting to Mark Williams when this action is complete. It will be a USFWS decision when the refuge is opened.

Next RAB Meeting
The next RAB meeting will be held on March 11, 2008 at 6:30 PM.

Adjourn

September Meeting Attachments and Handouts:
September 2007 RAB Meeting Minutes; September Attendees Signup Sheet; USACE Status of Technical Documents TERC; Status of Technical Documents MARC PBC

Shaw Environmental, Inc.

Longhorn Army Ammunition Plant
Restoration Advisory Board Meeting

Location	Karnack Community Center, Karnack, Texas
Date	11-Dec-2007 6:30 PM **page 1 of _**

Please sign in the space provided or add your name and address on blank line if your name does not appear below.

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continued on next page

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Shaw Environmental, Inc.

Longhorn Army Ammunition Plant
Restoration Advisory Board Meeting

Location	Karnack Community Center, Karnack, Texas	
Date	11-Dec-2007 6:30 PM	**page 2 of 2**

Please provide your address for future mailings or information.

ATTENDEES

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Mark Williams	Mark Williams	USFWS	903 679 9144	mark_williams@fws.gov

Technical Document Status Table
TERC Task Order N0. 0109
Longhorn Army Ammunition Plant

00063372

Site	Documents in Progress	Draft Document				Draft Final Document									Final
		Draft Submittal Date	Army Comments	Shaw RTC	Comment Resolution	Draft Final Submittal Date	AEC Comments	EPA Comments	TCEQ Comments	Shaw RTC	Army Comments	Comment Resolution	Army forward RTC to TCEQ & EPA	Comment Resolution	Final Submittal Date
08	Proposed Plan, LHAAP-08	05/01/06	05/24/06			07/07/06	08/25/06	08/21/06	09/20/06	09/29/06			11/21/06	TCEQ 12/07/06 EPA 02/21/07	
08	Record of Decision, LHAAP-08	11/05/07	11/09/07	11/26/07											
12	Operating Properly and Successfully Demonstration Report, LHAAP-12	07/25/07	07/27/07	07/31/07	08/02/07	08/02/07	NA	08/27/07	NA	08/29/07	08/29/07	08/29/07	08/29/07	08/31/07	09/07/07
32	Proposed Plan, LHAAP-32					07/21/06	08/25/06	09/05/06	09/12/06	09/19/06			11/21/06	TCEQ 12/07/06 EPA 01/26/07	
32	Record of Decision, LHAAP-32	11/05/07	11/09/07	11/26/07											
37/67	Proposed Plan, LHAAP-37/67	05/02/06	05/24/06	06/06/06	06/22/06	07/18/06	08/25/06	09/05/06	09/20/06	10/19/06	10/31/06	11/07/06	11/21/06	TCEQ 04/27/07 EPA 02/21/07	08/29/07
37/67	Record of Decision, LHAAP-37/67	11/27/07													
37/67	Remedial Design/LUCs, LHAAP-37/67	02/28/08													
48/53	Revised Proposed Plan, LHAAP-48/53	09/25/06	10/31/06	11/14/06	01/12/07	04/09/07	USACHPPM 04/25/07 OC 05/15/07	6/12/07 via USACE	04/27/07	06/27/07	07/12/07 07/13/07	08/16/07	08/27/07	TCEQ 10/16/07 EPA 08/27/07	
48/53	Record of Decision, LHAAP-48/53	11/05/07	11/09/07	11/26/07											
59	Site Investigation Report, LHAAP-59	11/02/06	11/07/06	11/09/06	11/15/06	11/21/06	None Required	03/20/07	01/11/2007, 03/20/07, & 03/22/07	04/02/07	RMZ 04/12/07 USACE 04/11/07	04/12/07	04/25/07	TCEQ 06/15/07 EPA 04/30/07	08/02/07
59	Decision Document, LHAAP-59														

Shaw Forecasted Submittal Date | Shaw Action Item | Army Action Item | EPA & TCEQ Action Item | Current Action item

Shaw® Shaw Environmental, Inc.

Status of Technical Documents – 4 week look ahead
Longhorn Army Ammunition Plant – PBC Contract
December 11, 2007

No.	Documents in Progress	Submittal Date	Army	Regulator	Comments Due from USACE/ Regulators	Comment Resolution	Status	On Stakeholder's Portal?	Remarks
	ERA								
	Final BERA	11/26/07	x	x	NA		Submitted	x	Will be on the portal by 12/13/07
	ENVIRONMENTAL								
	Revised Draft Final SI Report, LHAAP-02	12/21/07	x			Army review complete	Revised version in prep		
	Final Proposed Plan, LHAAP-60	12/30/07		x			Submitted ecological text insert on 10/31/07. Regulatory concurrence received. Final PP in prep		Comment received from regulators to address groundwater issue under LHAAP-58
	Draft Final Feasibility Study, LHAAP-58	9/20/07		x		Regulatory comments received	Preparing responses to comments		Hydrogeological assessment underway
	Draft Feasibility Study, LHAAP-17	12/30/07	x				In preparation		
	Draft Final Feasibility Study Addendum, LHAAP-16	12/30/07		x			In preparation		
	Final SI Report for LHAAP-06, 07, -51, -55, -64, -66, -68	12/17/07					In preparation		
	Final SI Report for LHAAP-35/36	12/30/07		x			RTC submitted on 10/31/07		Regulatory concurrence of RTC required
	Draft Final 5 Year Review Report for LHAAP-12, 16, and 18/24 RTCs	TBD		x	11/27/07		RTC submitted to regulators on 10/28/07. Letter from BRAC sent to EPA in November.		RTC in regulatory review

Shaw® Shaw Environmental, Inc.

Status of Technical Documents – 4 week look ahead
Longhorn Army Ammunition Plant – PBC Contract
December 11, 2007

No.	Documents in Progress	Submittal Date	Army	Regulator	Comments Due from USACE/ Regulators	Comment Resolution	Status	On Stakeholder's Portal?	Remarks
	Draft Final SI Report for LHAAP-03, Rev 01	12/30/07		x			Regulatory comments received. RTC in preparation	x	
	Final Site Evaluation Report for LHAAP-49	1/31/08		x			Regulatory comments received. RTC in preparation	x	

LONGHORN ARMY AMMUNITION PLANT,

Karnack, Texas

MONTHLY MANAGERS' MEETING

AGENDA

DATE: Tuesday, 11 December 2007
TIME: 2:00 p.m.
PLACE: Army Trailer, Longhorn Army Ammunition Plant (Telephone: 903-679-3192)

Welcome **RMZ**

Review of November 2007 Meeting Minutes and Action Items **RMZ**

Action Items

EPA
- EPA to provide comments to responses to the 5-year review report comments
- Raji Josiam to provide an example of ESD

TCEQ
- Fay Duke to provide a reference for annual O&M reporting requirement

Programmatic Issues – Ongoing Discussion

Defense Environmental Restoration Program (DERP) PBC Update **DC/PS**
- Document Status/Environmental Sites (Table)
- LHAAP-18/24 - Groundwater Treatment Plant Operation/Optimization
- 5-Year Review Report Status

DERP Total Environmental Restoration Contract Update **JE/PS**
- Documents Status/Environmental Sites (Table)
- Site 37 Status
- Site 59 Status
- Proposed Plans for Sites 8, 32, 48, 53 – Public Meeting

MMRP **JRL**
- Update

Transfer Update **RMZ**

Shaw® Shaw Environmental, Inc.

Subject: **Draft Final Minutes, Monthly Managers Meeting, Longhorn Army Ammunition Plant (LHAAP)**

Location of Meeting: **Longhorn Army Trailer, LHAAP Karnack, Texas**

Date of Meeting: **December 11, 2007; 2:00 PM – 5:30 PM**

Meeting Participants:

BRAC:	Rose M. Zeiler
USACE-Tulsa:	John Lambert, Cliff Murray
USAEC	Michael Kelly, Golden "Bill" Davis
Shaw Environmental:	Praveen Srivastav, Dave Cobb
USEPA Region 6:	Steve Tzhone, Raji Josiam
TCEQ:	Dale Vodak, Fay Duke
USFWS:	Paul Bruckwicki, Barry Forsythe

Welcome
Rose Zeiler welcomed everyone to the meeting and introduced Michael Kelly of USAEC to the group.

Review of November 2007 Meeting Minutes and Action Items
The November 2007 meeting minutes were reviewed and accepted.

Action Items

EPA

- EPA to provide comments on responses to the 5-year review report comments. This was discussed later in the meeting. See notes below.
- Raji Josiam to provide an example of ESD. Raji said that EPA's guidance provides examples of ESD but she will see what else can be provided to the Army.

TCEQ

- Fay Duke to provide a reference for annual O&M reporting requirement. Pending
- Fay to provide concurrence on all 7 sites (one was missing in her listing) for the Site Investigation Report, LHAAP-06, 07, 51, 55, 64, 66, and 68. She will issue another letter after receipt and review of the revised document.

Defense Environmental Restoration Program (DERP) PBC Update (Dave Cobb/Praveen Srivastav)

Document Status/Environmental Sites (Table). Dave Cobb briefly went over the highlights on the document status/environmental sites table. The Draft Final Revision 1 LHAAP-02 SI will be shipped this week. LHAAP-35/36 SI Report (?) is still in regulatory review and Fay Duke indicated that she is looking at the document and will be drafting a response soon. Shaw is still preparing RTCs for LHAAP-49 Site Evaluation Report and SI report for LHAAP-03.

LHAAP-18/24 – Groundwater Treatment Plant Operation/Optimization.
Dave Cobb indicated that the reinjection is still ongoing. However, data showing concentration results in the influent are not available yet.

Steve Tzhone asked about the time frame for the optimization test or pilot study. Praveen indicated it would take several months, approximately 6 months, to adequately characterize and evaluate the pilot study. Dave indicated that there has been initial success in terms of higher injection rates than expected but now Shaw will need to evaluate the second component, influent concentrations. Completion of the pilot study is expected in March 2008.

The 5-yr review report is on hold until programmatic issues are resolved.

A project milestone table was distributed.

Mike Kelly asked how many Records of Decision (RODs) were planned for this fiscal year (FY 08). Dave responded that there were about 4 planned. Praveen said that the dates in the table reflect when the final documents are expected to be published. The documents will get into regulatory review a couple months before that.

In the case of LHAAP-60, remedy-in-place will be achieved with the publication of the Final ROD. Praveen said that the Proposed Plan for the site is in progress.

Defense Environmental Restoration Program (DERP) TERC Update (Praveen Srivastav)

Document Status/Environmental Sites (Table)
The Army is moving forward in finalizing Proposed Plans for all TERC sites, except for LHAAP-59, to meet a public meeting date in late January 2008. The date of January 29 was discussed for the public meeting. This public meeting would be held for sites LHAAP-08, 32, 48 and 53. The Army also anticipates including sites LHAAP- 37 and 67. The RODs for many of these sites were in Army review as indicated by the status table. Rose reiterated that many of these sites were awaiting the finalization of the BERA and the inclusion of a paragraph regarding ecological risk that would complete the documents. The stakeholders have already reviewed the rest of the document.

Field work is ongoing at the LHAAP-37 and 67 sites. Shaw is on site conducting pumping tests this week to determine if the shallow aquifer at these sites would qualify for Class III designation. Shaw's hydrogeologist, Bill Foss, following state guidance on acceptable

methods for Class III aquifer testing, looked at two different methods that could be used: one method is testing the aquifer at a constant discharge rate corresponding to 150 gallons per day (gpd) and the other is using a cyclical recovery method.

Rose indicated that wells 35BWW04 and 05 (at LHAAP-37) may be good candidates for the test. She also wanted to include 35BWW07 in the test. Fay Duke agreed that the 35BWW07 should be included. It was discussed that the wells chosen for the test should be representative, not only of the site but for the formation involved. That may mean a well may not be a part of the site and may be outside the boundary, but would be important in the characterization of the groundwater for that site. Rose wanted to clarify this point since it may appear that a well tested for Class III classification of the groundwater may be outside the physical boundary but is in fact part of the site's well network. Fay indicated that Chuck (Stone) with the TCEQ would review the data.

Rose indicated that the Texas guidance on Class III well testing is very prescriptive and that no work plan will be generated. Mike Kelly said that it is probably a good idea to get a buy in from the State, and Fay said that she can try to do a review with Chuck Stone if the Army supplies the information. Rose suggested that data is already available in the cross-sections Fay and Rose completed a few months ago. Rose thought these cross-sections may be useful in selecting likely wells for the testing. They want to make sure they are fully penetrating and representative of the site and the zone of contamination. It was decided that Army would provide cross-sections and other well construction information to TCEQ for their expedited review.

Rose said the Army is planning to conduct aquifer tests at two TERC sites. Rose said that by doing the slug tests now, the Army was hoping to avoid a big delay on LHAAP37/67. Mike Kelly asked if the tests were a part of a larger effort to determine groundwater classification. Praveen Srivastav said that Shaw will probably want to test some PBC sites during the feasibility study (FS) stage. A good candidate would be LHAAP-58.

Installation Action Plan

Rose indicated that a data gathering meeting involving the Army and Shaw is planned for January 2008 in Tulsa and that an IAP validation meeting would be held in March 2008. Mike Kelly said that schedule is more aggressive than past years, but the regulators will get a copy of the IAP three weeks before the "validation" meeting so that they are familiar with it prior to the meeting. Bill Davis had suggested dates for the data gathering and data validation. John Lambert agreed that the timing is very aggressive. Rose said that March 2008 may not work for validation which would mean an additional meeting would be held after March. A validation meeting step may be by teleconference. Information on the upcoming IAP meeting will be forthcoming.

MMRP Update (John Lambert)

John Lambert indicated that the Explosive Safety Submission document will take several months to complete. Work will probably start late March or early April 2008. The draft removal action work plan should be provided to regulators by the end of January 2008.

Paul Bruckwicki asked when the burn off would occur and indicated that March would be too late because of beginning of bird nesting at that time. John Lambert said that January or February is designated for the burn off. Paul indicated mid-June might be the next best time for a burn off. Mike Kelly suggested that the Army can ask for a conditional approval of the ESS so that the burn off can proceed. Paul said that the FWS will not take the lead but would assist. Mike asked if the field work was for the EE/CA and John indicated that it was for the removal action, recommended by the engineering evaluation/ cost analysis (EE/CA). The Action Memo has been signed.

Other

USGS Groundwater Level Survey

Steve Tzhone said that it will be take about one more week to put the water level data into the geodatabase. Steve Tzhone said that the purpose of data collection by EPA/USGS is for Kent Becher (with USGS) to use the data in reviewing the GWTP reports, to determine if MNA remedies are working. He said that the Army (and Shaw) has access to the same database and, if there are any disputes, then everyone will know where the data came from. Rose said that the Army has not reviewed EPA's work plan or data collection process. Mike Kelly said that the Army works under approved work plan documents that include QA/QC procedures. There does not seem to be a reciprocal arrangement going on. Steve said that that the data they collect will help in their review and in resolving data gaps. Mike asked for clarification on whether it is for a data gap or a data need, and also asked if the data is necessary to support a remedy decision. Fay said that currently available data is not sufficient in many cases. Steve said that the EPA would like to have information available for reviewing documents.

Mike said that there is a tradeoff between putting effort in to defining the extent or to making the remedy robust with those data gaps in mind. He thinks that it is an important discussion to have prior to the data collection. Ideally, if more money is put toward the investigation it will result in less money being required for remediation. Fay said a lot of sites are going to MNA and a lot of data is needed to support that and determine that MNA is an appropriate remedy. John Lambert said that the Army is the lead agency and is collecting data to address the sites. Before Army collects the data, the purpose of the sampling and what is collected is discussed and decided. Then decisions are made on that data. On the other hand, if EPA is collecting its own data, there is a question of data comparability. Mike said comparability is the main issue between the data collected by the Army and the EPA.

Praveen Srivastav mentioned that USGS has stated that, based on their recent survey of wells, previous survey data available in the ShawView database is incorrect in some cases. USGS had found discrepancies of several feet in top of casing (TOC) elevations for several wells. Praveen indicated that the elevation data was collected by the Army, Jacobs, and Sverdrup, among others, and was provided to Shaw electronically at the beginning of their contract in 2003. He said that resolution of the discrepancies mentioned by USGS may an important issue. How would the discrepancy be resolved? Mike said the difference can also be because of what the survey was tied to, either the State Plane Coordinate system or another set. (Note: EPA had previously informed Shaw that the survey contractor used by USGS was licensed in

Louisiana and was not a Texas licensed surveyor). Steve said those are valid points and he would talk with Kent Becher of the USGS. Steve said that he is not proposing to replace any data; they just want an installation-wide snapshot. He is not advocating two datasets.

Programmatic Issues – Ongoing Discussion
Steve Tzhone said that there are two topics he would like to discuss here: one is the 5-year review and the other is FFA/NPL sites versus non-FFA/NPL sites. He indicated that the TCEQ and EPA are planning to hold a call regarding the Federal Facility Agreement (FFA). The question being asked is: What is EPA's role for sites that are not specifically listed as environmental sites in FFA or NPL?

5-Year Review
Steve Tzhone said EPA agrees with Army that comment on LHAAP-18/24 can be resolved by issuing an Explanation of Significant Difference (ESD).

Steve summarized that the issue at LHAAP-12 is whether the ROD intended MNA remedy to be a mechanism for containment or restoration. He indicated the EPA would not ask for the ROD to be amended to include restoration as an RAO, if either another well is installed or the frequency of the sampling be changed. He mentioned that the well would be installed between the site and the surface water feature to the north of the site. Steve conveyed that George Malone, attorney at EPA Headquarters will also be okay with what Steve is proposing and with the Army's position to keep the remedial action objectives (RAOs) the way they are.

Rose said that the Army has documentation that shows that RAOs were submitted to the EPA before submitting the ROD. She said she provided responses to EPA's comments and proposed text changes to the ROD, and sent the whole document for George Malone's review. EPA and Army agreed that the MNA would be included as a remedy because the EPA was not okay with the use of alternate concentration limits (ACLs) and with monitoring-only as a remedy. Steve said he was not arguing with previous EPA consensus, but reiterated that the language in the ROD could be interpreted either way. Steve said he is trying to minimize the impact to the ROD. Rose and Praveen said that they did not see the connection between the increased monitoring and the restoration issue. Fay said that MNA was not demonstrated before the ROD as there is only one well (where contamination can be monitored). Rose replied that the well locations were agreed upon by the regulators prior to installation. Steve said that he only wants to move the 5-year review forward and wants to bring something back to the restoration group in the form of either an additional well or increased monitoring frequency.

Mike Kelly stated that restoration is a highly desirable end point. It is a non-binding requirement of the NCP that the sites will be cleaned up as soon as possible. The regulators have over time turned this into a binding requirement even though the NCP does not stipulate it. He indicated that extended restoration timeframes can be supported for an MNA remedy if exposure can be controlled. From Army's programmatic view, MNA type remedies with extended periods of 10's to 100 years or so should be acceptable because the exposure can be controlled. Fay Duke said that she approached her management with the argument that Longhorn will be a wildlife refuge so time is not important. She was told by her management that a leniency on time should not be interpreted to mean that restoration is not a requirement.

At this, Mike stated that the Army is more willing to accept restoration as an RAO but recognizes that extended timeframes for achieving restoration are appropriate in many cases. Steve Tzhone said that the ROD mentions that Army is only liable for meeting MCL for TCE. Rose and Fay disagreed with Steve and said that the requirement of meeting chemical ARARs applied to all chemicals and will, therefore, apply to all VOCs, including daughter products of TCE.

Steve suggested that EPA may be satisfied with a statement by Army indicating that there is an intention of restoration of all VOCs and not just TCE. Army counter-proposed that the statement be that Army has the intention of meeting MCLs for TCE and all VOCs (that result from its degradation). Steve indicated his conditional approval.

Federal Facility Agreement
Steve relayed that, according to EPA's attorney George Malone, EPA should not be involved with the non-FFA sites. John Lambert indicated that the Army doesn't agree with George on equating non-NPL sites with a non-CERCLA designation. Mike Kelly said that Executive Order 12580 gives the Army the authority to conduct CERCLA responses at non-NPL sites and State concurrence is sought when selecting remedies. Fay Duke said that since there is no active RCRA permit, she is not sure which Texas guidance would apply to the non-NPL sites at Longhorn AAP. John Lambert said that he is aware of other installations where CERCLA is being used with RCRA requirements being met as ARARs and will look into it further. Fay says it will be important to determine which program to follow because she reviews corrective action sites very differently from CERCLA sites. Her preference would be to keep sites under the CERCLA program. Steve said that George Malone is adopting a very strict interpretation of the FFA and does not want EPA to be involved with non-NPL (and non-FFA) sites. Fay Duke asked whether amending the FFA was an option. Mike Kelly replied that the Army has several sites that should have a FFA but don't. Revising an existing FFA may be more difficult to get support. Steve asked why a memorandum of agreement (MOA) was not signed. Barry Forsythe thought that a MOA was signed. Steve replied that no one can find a copy of the signed document. There was no resolution of this issue.

Transfer Update (Rose M. Zeiler)
Nothing new discussed at this time.

Meeting Adjourned

Action Items:

EPA

- EPA to provide comments to responses to the 5-year review report comments
- Raji Josiam to provide an example of ESD
- Continued discussion of FFA/non-FFA sites

TCEQ

- Fay Duke to provide a reference for annual O&M reporting requirement. Pending

- Fay Duke to provide comments on LHAAP-35/36 RTC
- Fay to provide concurrence on the Site Investigation Report, LHAAP-06, 07, 51, 55, 64, 66, and 68.

00063383

LONGHORN ARMY AMMUNITION PLANT
MONTHLY MANAGERS' MEETING

Location	Longhorn Army Ammunition Plant, Karnack, Texas
Date	11-Dec-2007 **Time** 2:00 PM

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Longhorn Army Ammunition Plant
Project Milestone Schedule
December 11, 2007

Activity Name	Milestone Date
FINAL BERA	26-Nov-07
LHAAP-16	
FINAL FEASIBILITY STUDY ADDENDUM	22-Feb-08
FINAL PROPOSED PLAN	30-May-08
FINAL RECORD OF DECISION (ROD)	7-Nov-08
FINAL REMEDIAL DESIGN (RD)	13-Feb-09
FINAL COMPLETION REPORT	29-May-09
REMEDY IN PLACE (RIP)	29-May-09
RESPONSE COMPLETE (RC)	26-Jun-14
LHAAP-17	
FINAL FEASIBILITY STUDY	5-Mar-08
FINAL PROPOSED PLAN	11-Jun-08
FINAL RECORD OF DECISION (ROD)	19-Nov-08
FINAL REMEDIAL DESIGN (RD)	25-Feb-09
FINAL COMPLETION REPORT	3-Jun-09
REMEDY IN PLACE (RIP)	3-Jun-09
RESPONSE COMPLETE (RC)	4-Jun-14
LHAAP-18 & 24	
FINAL FEASIBILITY STUDY	22-Oct-08
FINAL PROPOSED PLAN	28-Jan-09
FINAL RECORD OF DECISION (ROD)	8-Jul-09
FINAL REMEDIAL DESIGN (RD)	14-Oct-09
FINAL COMPLETION REPORT	4-Nov-09
REMEDY IN PLACE (RIP)	4-Nov-09
LHAAP-29	
FINAL FEASIBILITY STUDY	5-Mar-08
FINAL PROPOSED PLAN	11-Jun-08
FINAL RECORD OF DECISION (ROD)	19-Nov-08
FINAL REMEDIAL DESIGN (RD)	25-Feb-09
FINAL COMPLETION REPORT	1-Jul-09
REMEDY IN PLACE (RIP)	1-Jul-09
RESPONSE COMPLETE (RC)	25-Jun-14
LHAAP-49	
FINAL SITE EVALUATION REPORT	31-Jan-08
FINAL PROPOSED PLAN	27-May-08
FINAL ROD	27-Oct-08
RESPONSE COMPLETE (RC)	27-Oct-08

Longhorn Army Ammunition Plant
Project Milestone Schedule
December 11, 2007

Activity Name	Milestone Date
LHAAP-35 & 36	
FINAL DATA EVALUATION REPORT	31-Jan-08
FINAL PROPOSED PLAN	30-Apr-08
FINAL RECORD OF DECISION (ROD)	10-Sep-08
RESPONSE COMPLETE (RC)	10-Sep-08
LHAAP-02	
FINAL SITE INVESTIGATION REPORT	19-Feb-08
FINAL DECISION DOCUMENT	24-Jul-08
RESPONSE COMPLETE (RC)	24-Jul-08
LHAAP-03	
FINAL SITE INVESTIGATION REPORT	31-Jan-08
FINAL DECISION DOCUMENT	24-Jun-08
RESPONSE COMPLETE	24-Jun-08
LHAAP-06, -07, -51, -55, -64, -66, -68	
FINAL SITE INVESTIGATION REPORT	17-Dec-07
FINAL DECISION DOCUMENT	18-Feb-08
RESPONSE COMPLETE	18-Feb-08
LHAAP-23	
RESPONSE COMPLETE	1-May-06
LHAAP-04	
FINAL NON-TCRA ACTION MEMO (if necessary)	4/31/2008
FINAL RA WORK PLAN	25-Aug-08
FINAL COMPLETION REPORT	1-Dec-08
RESPONSE COMPLETE (RC)	1-Dec-08
LHAAP-46	
FINAL FEASIBILITY STUDY	27-Mar-08
FINAL PROPOSED PLAN	3-Jul-08
FINAL RECORD OF DECISION (ROD)	11-Dec-08
FINAL REMEDIAL DESIGN (RD)	19-Mar-09
FINAL COMPLETION REPORT	9-Jul-09
REMEDY IN PLACE (RIP)	9-Jul-09
RESPONSE COMPLETE (RC)	9-Jul-14

Longhorn Army Ammunition Plant
Project Milestone Schedule
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Activity Name	Milestone Date
LHAAP-47	
FINAL FEASIBILITY STUDY	17-Jul-08
FINAL PROPOSED PLAN	23-Oct-08
FINAL RECORD OF DECISION (ROD)	2-Apr-09
FINAL REMEDIAL DESIGN (RD)	9-Jul-09
FINAL COMPLETION REPORT	29-Oct-09
REMEDY IN PLACE (RIP)	29-Oct-09
RESPONSE COMPLETE (RC)	29-Oct-14
LHAAP-50	
FINAL FEASIBILITY STUDY	24-Mar-08
FINAL PROPOSED PLAN	20-Jun-08
FINAL RECORD OF DECISION (ROD)	25-Dec-08
FINAL COMPLETION REPORT	19-Jun-09
REMEDY IN PLACE (RIP)	19-Jun-09
RESPONSE COMPLETE (RC)	19-Jun-14
LHAAP-58	
FINAL FEASIBILITY STUDY	28-Jan-08
FINAL PROPOSED PLAN	5-May-08
FINAL RECORD OF DECISION (ROD)	13-Oct-08
FINAL REMEDIAL DESIGN (RD)	12-Jan-09
FINAL COMPLETION REPORT	8-Apr-09
REMEDY IN PLACE (RIP)	8-Apr-09
RESPONSE COMPLETE (RC)	8-Apr-14
LHAAP-60	
FINAL PROPOSED PLAN	4-Feb-08
FINAL RECORD OF DECISION (ROD)	29-Apr-08
RESPONSE COMPLETE (RC)	29-Apr-08
Pistol Range	
FINAL FEASIBILITY STUDY	5-Mar-08
FINAL PROPOSED PLAN	1-Aug-08
FINAL RECORD OF DECISION (ROD)	5-Feb-09
FINAL COMPLETION REPORT	14-Apr-09
REMEDY IN PLACE (RIP)	14-Apr-09
RESPONSE COMPLETE (RC)	11-Apr-14

Technical Document Status Table
TERC Task Order N0. 0109
Longhorn Army Ammunition Plant

00063387

Site	Documents in Progress	Draft Document				Draft Final Document									Final
		Draft Submittal Date	Army Comments	Shaw RTC	Comment Resolution	Draft Final Submittal Date	AEC Comments	EPA Comments	TCEQ Comments	Shaw RTC	Army Comments	Comment Resolution	Army forward RTC to TCEQ & EPA	Comment Resolution	Final Submittal Date
08	Proposed Plan, LHAAP-08	05/01/06	05/24/06			07/07/06	08/25/06	08/21/06	09/20/06	09/29/06			11/21/06	TCEQ 12/07/06 EPA 02/21/07	
08	Record of Decision, LHAAP-08	11/05/07	11/09/07	11/26/07											
12	Operating Properly and Successfully Demonstration Report, LHAAP-12	07/25/07	07/27/07	07/31/07	08/02/07	08/02/07	NA	08/27/07	NA	08/29/07	08/29/07	08/29/07	08/29/07	08/31/07	09/07/07
32	Proposed Plan, LHAAP-32					07/21/06	08/25/06	09/05/06	09/12/06	09/19/06			11/21/06	TCEQ 12/07/06 EPA 01/26/07	
32	Record of Decision, LHAAP-32	11/05/07	11/09/07	11/26/07											
37/67	Proposed Plan, LHAAP-37/67	05/02/06	05/24/06	06/06/06	06/22/06	07/18/06	08/25/06	09/05/06	09/20/06	10/19/06	10/31/06	11/07/06	11/21/06	TCEQ 04/27/07 EPA 02/21/07	08/29/07
37/67	Record of Decision, LHAAP-37/67	11/27/07													
37/67	Remedial Design/LUCs, LHAAP-37/67	02/28/08													
48/53	Revised Proposed Plan, LHAAP-48/53	09/25/06	10/31/06	11/14/06	01/12/07	04/09/07	USACHPPM 04/25/07 OC 05/15/07	6/12/07 via USACE	04/27/07	06/27/07	07/12/07 07/13/07	08/16/07	08/27/07	TCEQ 10/16/07 EPA 08/27/07	
48/53	Record of Decision, LHAAP-48/53	11/05/07	11/09/07	11/26/07											
59	Site Investigation Report, LHAAP-59	11/02/06	11/07/06	11/09/06	11/15/06	11/21/06	None Required	03/20/07	01/11/2007, 03/20/07, & 03/22/07	04/02/07	RMZ 04/12/07 USACE 04/11/07	04/12/07	04/25/07	TCEQ 06/15/07 EPA 04/30/07	08/02/07
59	Decision Document, LHAAP-59														

Shaw Forecasted Submittal Date | Shaw Action Item | Army Action Item | EPA & TCEQ Action Item | Current Action item

Shaw® Shaw Environmental, Inc.

Status of Technical Documents – 4 week look ahead
Longhorn Army Ammunition Plant – PBC Contract
December 11, 2007

No.	Documents in Progress	Submittal Date	Army	Regulator	Comments Due from USACE/ Regulators	Comment Resolution	Status	On Stakeholder's Portal?	Remarks
	ERA								
	Final BERA	11/26/07	x	x	NA		Submitted	x	Will be on the portal by 12/13/07
	ENVIRONMENTAL								
	Revised Draft Final SI Report, LHAAP-02	12/21/07	x			Army review complete	Revised version in prep		
	Final Proposed Plan, LHAAP-60	12/30/07		x			Submitted ecological text insert on 10/31/07. Regulatory concurrence received. Final PP in prep		Comment received from regulators to address groundwater issue under LHAAP-58
	Draft Final Feasibility Study, LHAAP-58	9/20/07		x		Regulatory comments received	Preparing responses to comments		Hydrogeological assessment underway
	Draft Feasibility Study, LHAAP-17	12/30/07	x				In preparation		
	Draft Final Feasibility Study Addendum, LHAAP-16	12/30/07		x			In preparation		
	Final SI Report for LHAAP-06, 07, -51, -55, -64, -66, -68	12/17/07					In preparation		
	Final SI Report for LHAAP-35/36	12/30/07		x			RTC submitted on 10/31/07		Regulatory concurrence of RTC required
	Draft Final 5 Year Review Report for LHAAP-12, 16, and 18/24 RTCs	TBD		x	11/27/07		RTC submitted to regulators on 10/28/07. Letter from BRAC sent to EPA in November.		RTC in regulatory review

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Status of Technical Documents – 4 week look ahead
Longhorn Army Ammunition Plant – PBC Contract
December 11, 2007

No.	Documents in Progress	Submittal Date	Army	Regulator	Comments Due from USACE/ Regulators	Comment Resolution	Status	On Stakeholder's Portal?	Remarks
	Draft Final SI Report for LHAAP-03, Rev 01	12/30/07		x			Regulatory comments received. RTC in preparation	x	
	Final Site Evaluation Report for LHAAP-49	1/31/08		x			Regulatory comments received. RTC in preparation	x	