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White Sands Missile Range-
HELSTF Construction Landfill

Data Review

WHITE SANDS MISSLE RANGE, NEW MEXICO

Volatiles, Semivolatiles, GRO/DRO, Metals and
Miscellaneous Analyses

SDG #1108185, 1108207 and 1108232

Analyses Performed By:
DHL Analytical, Inc.
Round Rock, Texas

Report #14706R
Review Level: Tier II
Project: GP08WSMR.0MON.2011F

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #1108185, 1108207 and 1108232 for samples collected in association with the HELSTF Construction Landfill. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	DRO/ GRO	SVOC	MET	MISC
1108185	HLSF-3839-HMW-034-0811	1108185-01	Water	8/17/2011		X	X	X	X	X
	HLSF-3839-HMW-035-0811	1108185-02	Water	8/17/2011		X	X	X	X	X
	HLSF-3839-TB-0811	1108185-03	Water	8/17/2011		X				
1108207	HLSF-3839-HMW-008-0811	1108207-01	Water	8/19/2011		X	X	X	X	X
	HLSF-3839-HMW-032-0811	1108207-02	Water	8/19/2011		X	X	X	X	X
	HLSF-3839-TB-0811	1108207-03	Water	8/19/2011		X				
1108232	HLSF-3839-HMW-008-0811	1108232-01	Water	8/23/2011						X
	HLSF-3839-HMW-059-0811	1108232-02	Water	8/23/2011		X	X	X	X	X
	HLSF-3839-HMW-159-0811	1108232-03	Water	8/23/2011		X	X	X	X	X
	HLSF-3839-RB-001-0811	1108232-04	Water	8/23/2011		X	X	X	X	X
	HLSF-3839-TB-0811	1108232-05	Water	8/23/2011		X				

Note:

1. Miscellaneous analyses include TOC, alkalinity, chloride, sulfate and pH.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 8260B, 8270C and 8015D. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260	Water	14 days from collection to analysis	Cool to 4°C±2°C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to 4°C±2°C.

s.u. Standard units

Please Note: 2-Chloroethyl vinyl ether degrades in the presence of acid. Since the samples were preserved with acid to a pH of less than 2, all sample results for 2-chloroethyl vinyl ether are rejected.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination with which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
HLSF-3839-HMW-059-0811 HLSF-3839-HMW-159-0811	Acetone	Detected sample results <RL and <BAL	“UB” at the RL

RL Reporting limit

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
HLSF-3839-HMW-035-0811	2-Chloroethylvinylether	0%	0%

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 40% for water matrices and 70% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
HLSF-3839-HMW-159-0811 HLSF-3839-HMW-059-0811	Chloromethane	0.00100 U	0.00107	AC

AC Acceptable
U Not Detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. Compound Identification

Compounds are identified on the GC/MS by laboratory personnel using the analytes relative retention time and ion spectra. These identifications were not reviewed by the data validator.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260B	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X	X		
C. Trip blanks		X	X		
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)		X	X		
Matrix Spike Duplicate(MSD)		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R Percent recovery
RPD Relative percent difference

SEMI-VOLATILE VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4°C ± 2°C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
HLSF-3839-HMW-008-0811 HLSF-3839-HMW-059-0811 HLSF-3839-HMW-159-0811	Benzoic Acid	Detected sample results <RL and <BAL	“UB” at the RL
HLSF-3839-HMW-032-0811		Detected sample results >RL and <BAL	“UB” at detected sample concentration

RL Reporting limit

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC

analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
HLSF-3839-HMW-034-0811 HLSF-3839-HMW-032-0811	Phenol-d6	AC
	2-Fluorophenol	AC
	2,4,6-Tribromophenol	>UL
	Nitrobenzene-d5	AC
	2-Fluorobiphenyl	AC
	Terphenyl-d14	AC
HLSF-3839-HMW-035-0811 HLSF-3839-HMW-008-0811 HLSF-3839-HMW-059-0811 HLSF-3839-HMW-159-0811	Phenol-d6	AC
	2-Fluorophenol	AC
	2,4,6-Tribromophenol	>UL
	Nitrobenzene-d5	>UL
	2-Fluorobiphenyl	AC
	Terphenyl-d14	AC

UL Upper control limit
AC Acceptable

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
	Detect	

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
HLSF-3839-HMW-035-0811	3,3-Dichlorobenzidine	>UL	AC
	Benzo(a)pyrene	>UL	AC
	Benzo(b)fluoranthene	>UL	>UL
	Benzoic Acid	>UL	>UL
	Chrysene	>UL	AC
	Hexachlorobenzene	>UL	AC
	N-Nitrosodiphenylamine	>UL	AC
	Pentachlorophenol	>UL	>UL
	1,2,4-Trichlorobenzene	AC	>UL
	2,4-Dichlorophenol	AC	>UL
	2,4-Dimehtylphenol	AC	>UL
	2,6-Dinitrotoluene	AC	>UL
	4-Chloro-3-methylphenol	AC	>UL
	Hexachlorobutadiene	AC	>UL
	Naphthalene	AC	>UL

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
HLSF-3839-HMW-035-0811	Benzidine
	2-Picoline
	Ethyl Methanesulfonate

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
HLSF-3839-HMW-034-0811 HLSF-3839-HMW-035-0811 HLSF-3839-TB-0811 HLSF-3839-HMW-008-0811 HLSF-3839-HMW-032-0811 HLSF-3839-TB-0811	Benzoic Acid	>UL	NA
HLSF-3839-HMW-059-0811 HLSF-3839-HMW-159-0811 HLSF-3839-RB-001-0811	Benzidine	<LL but >10%	<LL but >10%
	2-Chloronaphthalene	AC	>UL
	Dimethylphenylamine	<LL but >10%	<LL but >10%

The criteria used to evaluate the LCS recoveries are presented in the following table. In the case of an LCS deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

Sample locations associated with LCS/LCSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
HLSF-3839-HMW-059-0811 HLSF-3839-HMW-159-0811 HLSF-3839-RB-001-0811	4-Chloroaniline

The criteria used to evaluate the RPD between the LCS/LCSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 40% for water matrices and 70% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
HLSF-3839-HMW-159-0811 HLSF-3839-HMW-059-0811	Allcompounds	U	U	AC

AC Acceptable
U Not Detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. Compound Identification

Compounds are identified on the GC/MS by laboratory personnel using the analytes relative retention time and ion spectra. These identifications were not reviewed by the data validator.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X	X		
B. Equipment blanks		X	X		
Laboratory Control Sample (LCS) %R		X	X		
Laboratory Control Sample Duplicate (LCSD) %R		X	X		
LCS/LCSD Precision (RPD)		X	X		
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate(MSD) %R		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X	X		
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content					X

%R Percent recovery
RPD Relative percent difference

DIESEL RANGE ORGANICS (DRO) AND GASOLINE RANGE (GRO) ORGANICS ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8015D	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to 4°C±2°C
	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to 4°C±2°C

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The analysis requires surrogate compounds exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

5. Laboratory Control Sample (LCS) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 40% for water matrices and 70% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
HLSF-3839-HMW-159-0811 HLSF-3839-HMW-059-0811	DRO	0.0500 U	0.0500 U	AC
	GRO	0.0600 U	0.0600 U	AC

AC Acceptable
U Not Detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. Compound Identification

Compounds are identified on the GC by laboratory personnel using the analytes relative retention time. These identifications were not reviewed by the data validator.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GRO/DRO

GRO/DRO; SW-846 8015D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%RSD – relative standard deviation, %R - percent recovery, RPD - relative percent difference, %D – difference

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 6020, EPA 300.0, SM 5310C, SM 2320B and SM 4500-H. Data were reviewed in accordance with USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review of July 2002.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

  B The reported value was obtained from a reading less than the contract-required detection limit (CRDL), but greater than or equal to the instrument detection limit (IDL).

- Quantitation (Q) Qualifiers

  E The reported value is estimated due to the presence of interference.

  N Spiked sample recovery is not within control limits.

  * Duplicate analysis is not within control limits.

- Validation Qualifiers

  J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

  UB Analyte considered non-detect at the listed value due to associated blank contamination.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

METALS ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 6020	Soil	180 days from collection to analysis	Cool to 4°C±2°C.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

3.1 MS/MSD Analysis

All metal analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory qualifier "N" will be removed.

All analytes associated with MS recoveries were within control limits with the exception of the following analytes present in the table below.

Sample Location	Analytes	MS Recovery	MSD Recovery
HLSF-3839-HMW-035-0811 – Diss.	Cadmium	69.5%	AC
	Silver	71.7%	AC

The criteria used to evaluate MS recoveries are presented in the following table. In the case of an MS deviation, the sample results are qualified. The qualifications are applied to all sample results associated with this SDG.

Control limit	Sample Result	Qualification
MS percent recovery 30% to 74%	Non-detect	UJ
	Detect	J
MS percent recovery <30%	Non-detect	R
	Detect	J
MS percent recovery >125%	Non-detect	No Action
	Detect	J

3.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the CRDL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the CRDL, a control limit of one times the CRDL is applied for water matrices and two times the CRDL for soil matrices.

The laboratory duplicate sample results exhibited RPD within the control limit.

4. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 40% for water matrices and 70% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
HLSF-3839-HMW-159-0811 HLSF-3839-HMW-059-0811	Arsenic	0.0122	0.0115	5.9%
	Barium	0.0104 J	0.00970 J	AC
	Calcium	476	468	1.7%
	Magnesium	549	547	0.4%
	Potassium	53.1	53.8	AC
	Selenium	0.0267	0.0253	AC
	Sodium	2460	2410	2.1%
HLSF-3839-HMW-159-0811-Diss./ HLSF-3839-HMW-059-0811-Diss.	Arsenic	0.0121	0.0118	2.5%
	Barium	0.00983 J	0.00957 J	AC
	Calcium	507	486	4.2%
	Magnesium	590	557	5.8%
	Potassium	59.2	54.2	AC
	Selenium	0.0265	0.0270	AC

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
	Sodium	2620	2490	5.1%

AC Acceptable
U Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS/LCSD analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS/LCSD analysis exhibited recoveries within and RPD between the control limits.

6. Furnace Analysis QC

No furnace analyses were performed on the samples.

7. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

8. System Performance and Overall Assessment

The calculated %D between the total and the dissolved sample results were within the control limit, with the exception of the analytes presented in the following table.

Sample Location	Analytes	%D
HLSF-3839-HMW-035-0811	Selenium	11.8%

The criteria used to evaluate total and dissolved %D are presented in the following table. In the case of a total and dissolved %D deviation, the sample results are qualified. The qualifications are applied to the associated total and dissolved sample results associated with the sample location referenced above.

Sample Concentration	Control Limit	Sample Result	Qualification
Dissolved sample concentration > total sample concentration and > 5x RL	>10%	Non-detect	UJ
		Detect	J
Dissolved sample concentration > total sample concentration and > 5x RL	>50%	Non-detect	R
		Detect	R

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METALS

METALS; SW-846 6020	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP) Atomic Absorption – Manual Cold Vapor (CV)					
Tier II Validation					
Holding Times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks	X				
B. Method Blanks		X		X	
C. Equipment/Field Blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate (LCSD)		X		X	
LCS/LCSD RPD		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Reporting Limit Verification		X		X	
Moisture Content					X

%R Percent recovery
RPD Relative percent difference

GENERAL CHEMISTRY ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
TOC by SM 5310C	Water	28 days from collection to analysis	Cool to 4°C±2°C; preserved to a pH of less than 2 s.u.
Chloride and Sulfate by EPA 300.0	Water	28 days from collection to analysis	Cool to 4°C±2°C.
SM2320 B (Alkalinity)	Water	14 days from collection to analysis	Cool to 4°C±2°C.
pH by SM 4500-H	Water	ASAP	Cool to 4°C±2°C.

s.u. Standard units

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
HLSF-3839-HMW-008-0811 HLSF-3839-HMW-059-0811 HLSF-3839-HMW-159-0811	TOC	Detected sample results <RL and <BAL	“UB” at the RL

RL Reporting limit

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

3.1 MS/MSD Analysis

All metal analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory qualifier "N" will be removed.

The MS/MSD analysis exhibited recoveries within the control limits.

3.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the CRDL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the CRDL, a control limit of one times the CRDL is applied for water matrices and two times the CRDL for soil matrices.

The laboratory duplicate sample results exhibited RPD within the control limit.

4. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 40% for water matrices and 70% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
HLSF-3839-HMW-159-0811/ HLSF-3839-HMW-059-0811	Chloride	1140	1130	0.9%
	Sulfate	7850	7730	1.5%
	Alkalinity	180	180	0%
	pH	7.63	7.65	AC

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

5. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS/LCSD analysis must exhibit a

percent recovery between the control limits of 80% and 120%.

The LCS/LCSD analysis exhibited recoveries within and RPD between the control limits.

6. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL CHEMISTRY

General Chemistry: EPA 300.0, SM 2320B, SM 5310C, and SM 4500-H	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Miscellaneous Instrumentation					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X	X		
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Dilution Factor					X
Moisture Content					X

%RSD – relative standard deviation, %R - percent recovery, RPD - relative percent difference, %D – difference

VALIDATION PERFORMED BY: Jeffrey L. Davin

SIGNATURE:

DATE: September 19, 2011

PEER REVIEW: Dennis Capria

DATE: October 10, 2011

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-034-0811
Lab ID: 1108185-01
Collection Date: 08/17/11 11:45 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		**M8015D**					**Analyst: DO**
TPH-DRO C10-C28	<0.0500	0.0500	0.100		mg/L	1	08/25/11 10:59 AM
Surr: Isopropylbenzene	59.2	0	47 - 142		%REC	1	08/25/11 10:59 AM
Surr: Octacosane	119	0	51 - 124		%REC	1	08/25/11 10:59 AM
Method 8015 Gasoline (GRO)		**M8015V**					**Analyst: DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	08/23/11 12:40 PM
Surr: Tetrachlorethene	104	0	74 - 138		%REC	1	08/23/11 12:40 PM
Mercury Filtered (0.45µ)		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/26/11 01:29 PM
Total Mercury: Aqueous		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/26/11 01:08 PM
Dissolved Metals-ICPMS (0.45µ)		**SW6020**					**Analyst: AJR**
Arsenic	0.0106	0.00200	0.00600		mg/L	1	08/25/11 03:36 PM
Barium	0.0147	0.00300	0.0100		mg/L	1	08/25/11 03:36 PM
Cadmium	<0.000300	0.000300	0.00100	J	mg/L	1	08/25/11 03:36 PM
Calcium	466	10.0	30.0		mg/L	100	08/26/11 04:31 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/25/11 03:36 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 03:36 PM
Magnesium	525	10.0	30.0		mg/L	100	08/26/11 04:31 PM
Potassium	53.1	10.0	30.0		mg/L	100	08/26/11 04:31 PM
Selenium	0.00825	0.00200	0.00600		mg/L	1	08/25/11 03:36 PM
Silver	<0.000600	0.000600	0.00200	J	mg/L	1	08/25/11 03:36 PM
Sodium	2270	10.0	30.0		mg/L	100	08/26/11 04:31 PM
Trace Metals: ICP-MS - Water		**SW6020**					**Analyst: AJR**
Arsenic	0.0102	0.00200	0.00600		mg/L	1	08/25/11 05:59 PM
Barium	0.0143	0.00300	0.0100		mg/L	1	08/25/11 05:59 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 05:59 PM
Calcium	464	10.0	30.0		mg/L	100	08/26/11 04:36 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/25/11 05:59 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 05:59 PM
Magnesium	505	10.0	30.0		mg/L	100	08/26/11 04:36 PM
Potassium	50.9	10.0	30.0		mg/L	100	08/26/11 04:36 PM
Selenium	0.00787	0.00200	0.00600		mg/L	1	08/25/11 05:59 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/25/11 05:59 PM
Sodium	2200	10.0	30.0		mg/L	100	08/26/11 04:36 PM
Semivolatiles by GC/MS - Water		**SW8270C**					**Analyst: DO**
1,2,4,5-Tetrachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
1,2,4-Trichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
1,2-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
1,2-Diphenylhydrazine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
1,3-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
1,4-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
1-Chloronaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 02:20 PM
1-Methylnaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	08/29/11 01:10 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-034-0811
Lab ID: 1108185-01
Collection Date: 08/17/11 11:45 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
1-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
2,4,5-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2,4,6-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2,4-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2,4-Dimethylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2,4-Dinitrophenol	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 01:10 AM
2,4-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2,6-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2,6-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2-Chloronaphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2-Chlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2-Methylnaphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
2-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2-Nitrophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
2-Picoline	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
3,3'-Dichlorobenzidine	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 01:10 AM
3-Methylcholanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
3-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
4,6-Dinitro-2-methylphenol	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 01:10 AM
4-Aminobiphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
4-Bromophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
4-Chloro-3-methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
4-Chloroaniline	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 01:10 AM
4-Chlorophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
4-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
4-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
4-Nitrophenol	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 01:10 AM
7,12-Dimethylbenz(a)anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
Acenaphthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Acenaphthylene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Acetophenone	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Aniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Benzidine	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:10 AM
Benzo[a]anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Benzo[a]pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Benzo[b]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Benzo[g,h,i]perylene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Benzo[k]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Benzoic acid	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:10 AM
Benzyl alcohol	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 01:10 AM
Biphenyl	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Bis(2-chloroethoxy)methane	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-034-0811
Lab ID: 1108185-01
Collection Date: 08/17/11 11:45 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Bis(2-chloroisopropyl)ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Bis(2-ethylhexyl)phthalate	<0.00100	0.00100	0.00300		mg/L	1	08/29/11 01:10 AM
Butyl benzyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:10 AM
Carbazole	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Chrysene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Di-n-butyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:10 AM
Di-n-octyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:10 AM
Dibenz(a,j)acridine	<0.00100	0.00100	0.00400	N	mg/L	1	09/09/11 02:20 PM
Dibenz[a,h]anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Dibenzofuran	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Diethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:10 AM
Dimethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:10 AM
Dimethylphenethylamine	<0.00200	0.00200	0.00600		mg/L	1	09/09/11 02:20 PM
Diphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
Ethyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
Fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Fluorene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Hexachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Hexachlorobutadiene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Hexachlorocyclopentadiene	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 01:10 AM
Hexachloroethane	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Indeno[1,2,3-cd]pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Isophorone	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Methyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
N-Nitrosodi-n-propylamine	<0.000100	0.000100	0.000800		mg/L	1	08/29/11 01:10 AM
N-Nitrosodimethylamine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
N-Nitrosodiphenylamine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
N-Nitrosopiperidine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
Naphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Nitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
p-Dimethylaminoazobenzene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 02:20 PM
Pentachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Pentachloronitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
Pentachlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Phenacetin	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
Phenanthrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Phenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Pronamide	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:20 PM
Pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:10 AM
Pyridine	<0.000800	0.000800	0.00200		mg/L	1	08/29/11 01:10 AM
Surr: 2,4,6-Tribromophenol	125	0	42 - 124	S	%REC	1	08/29/11 01:10 AM
Surr: 2,4,6-Tribromophenol	110	0	42 - 124		%REC	1	09/09/11 02:20 PM
Surr: 2-Fluorobiphenyl	103	0	50 - 110		%REC	1	08/29/11 01:10 AM
Surr: 2-Fluorobiphenyl	76.8	0	50 - 110		%REC	1	09/09/11 02:20 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-034-0811
Lab ID: 1108185-01
Collection Date: 08/17/11 11:45 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	80.8	0	20 - 110		%REC	1	09/09/11 02:20 PM
Surr: 2-Fluorophenol	78.2	0	20 - 110		%REC	1	08/29/11 01:10 AM
Surr: 4-Terphenyl-d14	118	0	51 - 135		%REC	1	08/29/11 01:10 AM
Surr: 4-Terphenyl-d14	88.0	0	51 - 135		%REC	1	09/09/11 02:20 PM
Surr: Nitrobenzene-d5	107	0	41 - 110		%REC	1	08/29/11 01:10 AM
Surr: Nitrobenzene-d5	104	0	41 - 110		%REC	1	09/09/11 02:20 PM
Surr: Phenol-d6	49.5	0	20 - 115		%REC	1	08/29/11 01:10 AM
Surr: Phenol-d6	52.0	0	20 - 115		%REC	1	09/09/11 02:20 PM
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 07:44 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 07:44 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 07:44 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 07:44 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 07:44 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 07:44 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 07:44 PM
2-Chloroethylvinylether	~~<0.00500~~	~~0.00500~~	~~0.0150~~	R	mg/L	1	08/24/11 07:44 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 07:44 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 07:44 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 07:44 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 07:44 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-034-0811
Lab ID: 1108185-01
Collection Date: 08/17/11 11:45 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 07:44 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 07:44 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 07:44 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 07:44 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 07:44 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 07:44 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 07:44 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 07:44 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 07:44 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 07:44 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 07:44 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 07:44 PM
Surr: 1,2-Dichloroethane-d4	104	0	70 - 120		%REC	1	08/24/11 07:44 PM
Surr: 4-Bromofluorobenzene	103	0	75 - 120		%REC	1	08/24/11 07:44 PM
Surr: Dibromofluoromethane	105	0	85 - 115		%REC	1	08/24/11 07:44 PM
Surr: Toluene-d8	98.9	0	85 - 120		%REC	1	08/24/11 07:44 PM
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	945	30.0	100		mg/L	100	08/18/11 01:44 PM
Sulfate	7470	100	300		mg/L	100	08/18/11 01:44 PM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	172	10.0	20.0		mg/L	1	08/18/11 02:48 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/18/11 02:48 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/18/11 02:48 PM
Alkalinity, Total (As CaCO3)	172	10.0	20.0		mg/L	1	08/18/11 02:48 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-034-0811
Lab ID: 1108185-01
Collection Date: 08/17/11 11:45 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
pH		**M4500-H+ B**					**Analyst: JBC**
pH	7.30	0	0		pH Units	1	08/18/11 02:04 PM
Total Organic Carbon		**M5310C**					**Analyst: TGK**
Total Organic Carbon	0.763	0.300	1.00	J	mg/L	1	08/19/11 12:44 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-035-0811
Lab ID: 1108185-02
Collection Date: 08/17/11 01:13 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		**M8015D**					**Analyst: DO**
TPH-DRO C10-C28	<0.0500	0.0500	0.100		mg/L	1	08/25/11 11:08 AM
Surr: Isopropylbenzene	61.2	0	47 - 142		%REC	1	08/25/11 11:08 AM
Surr: Octacosane	119	0	51 - 124		%REC	1	08/25/11 11:08 AM
Method 8015 Gasoline (GRO)		**M8015V**					**Analyst: DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	08/23/11 01:05 PM
Surr: Tetrachlorethene	101	0	74 - 138		%REC	1	08/23/11 01:05 PM
Mercury Filtered (0.45µ)		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/26/11 01:18 PM
Total Mercury: Aqueous		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/26/11 12:58 PM
Dissolved Metals-ICPMS (0.45µ)		**SW6020**					**Analyst: AJR**
Arsenic	0.00822	0.00200	0.00600		mg/L	1	08/25/11 03:19 PM
Barium	0.0106	0.00300	0.0100		mg/L	1	08/25/11 03:19 PM
Cadmium	<0.000300	0.000300	0.00100	J	mg/L	1	08/25/11 03:19 PM
Calcium	508	10.0	30.0		mg/L	100	08/30/11 01:46 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/25/11 03:19 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 03:19 PM
Magnesium	529	10.0	30.0		mg/L	100	08/30/11 01:46 PM
Potassium	44.5	10.0	30.0		mg/L	100	08/30/11 01:46 PM
Selenium	0.278	0.00200	0.00600	J	mg/L	1	08/25/11 03:19 PM
Silver	<0.000600	0.000600	0.00200	J	mg/L	1	08/25/11 03:19 PM
Sodium	2140	10.0	30.0		mg/L	100	08/30/11 01:46 PM
Trace Metals: ICP-MS - Water		**SW6020**					**Analyst: AJR**
Arsenic	0.00764	0.00200	0.00600		mg/L	1	08/25/11 05:47 PM
Barium	0.00961	0.00300	0.0100	J	mg/L	1	08/25/11 05:47 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 05:47 PM
Calcium	508	10.0	30.0		mg/L	100	08/26/11 03:46 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/25/11 05:47 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 05:47 PM
Magnesium	531	10.0	30.0		mg/L	100	08/26/11 03:46 PM
Potassium	45.8	10.0	30.0		mg/L	100	08/26/11 03:46 PM
Selenium	0.247	0.00200	0.00600	J	mg/L	1	08/25/11 05:47 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/25/11 05:47 PM
Sodium	2000	10.0	30.0		mg/L	100	08/26/11 03:46 PM
Semivolatiles by GC/MS - Water		**SW8270C**					**Analyst: DO**
1,2,4,5-Tetrachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
1,2,4-Trichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
1,2-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
1,2-Diphenylhydrazine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
1,3-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
1,4-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
1-Chloronaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 02:43 PM
1-Methylnaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	08/29/11 01:35 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-035-0811
Lab ID: 1108185-02
Collection Date: 08/17/11 01:13 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
1-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
2,4,5-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2,4,6-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2,4-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2,4-Dimethylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2,4-Dinitrophenol	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 01:35 AM
2,4-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2,6-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2,6-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2-Chloronaphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2-Chlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2-Methylnaphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
2-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2-Nitrophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
2-Picoline	<0.000200	0.000200	0.000800	J	mg/L	1	09/09/11 02:43 PM
3,3'-Dichlorobenzidine	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 01:35 AM
3-Methylcholanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
3-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
4,6-Dinitro-2-methylphenol	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 01:35 AM
4-Aminobiphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
4-Bromophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
4-Chloro-3-methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
4-Chloroaniline	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 01:35 AM
4-Chlorophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
4-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
4-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
4-Nitrophenol	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 01:35 AM
7,12-Dimethylbenz(a)anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
Acenaphthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Acenaphthylene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Acetophenone	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Aniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Benzidine	<0.00200	0.00200	0.00600	J	mg/L	1	08/29/11 01:35 AM
Benzo[a]anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Benzo[a]pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Benzo[b]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Benzo[g,h,i]perylene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Benzo[k]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Benzoic acid	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:35 AM
Benzyl alcohol	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 01:35 AM
Biphenyl	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Bis(2-chloroethoxy)methane	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-035-0811
Lab ID: 1108185-02
Collection Date: 08/17/11 01:13 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Bis(2-chloroisopropyl)ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Bis(2-ethylhexyl)phthalate	<0.00100	0.00100	0.00300		mg/L	1	08/29/11 01:35 AM
Butyl benzyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:35 AM
Carbazole	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Chrysene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Di-n-butyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:35 AM
Di-n-octyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:35 AM
Dibenz(a,j)acridine	<0.00100	0.00100	0.00400	N	mg/L	1	09/09/11 02:43 PM
Dibenz[a,h]anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Dibenzofuran	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Diethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:35 AM
Dimethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 01:35 AM
Dimethylphenethylamine	<0.00200	0.00200	0.00600		mg/L	1	09/09/11 02:43 PM
Diphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
Ethyl methanesulfonate	<0.000200	0.000200	0.000800	J	mg/L	1	09/09/11 02:43 PM
Fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Fluorene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Hexachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Hexachlorobutadiene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Hexachlorocyclopentadiene	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 01:35 AM
Hexachloroethane	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Indeno[1,2,3-cd]pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Isophorone	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Methyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
N-Nitrosodi-n-propylamine	<0.000100	0.000100	0.000800		mg/L	1	08/29/11 01:35 AM
N-Nitrosodimethylamine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
N-Nitrosodiphenylamine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
N-Nitrosopiperidine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
Naphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Nitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
p-Dimethylaminoazobenzene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 02:43 PM
Pentachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Pentachloronitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
Pentachlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Phenacetin	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
Phenanthrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Phenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Pronamide	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 02:43 PM
Pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 01:35 AM
Pyridine	<0.000800	0.000800	0.00200		mg/L	1	08/29/11 01:35 AM
Surr: 2,4,6-Tribromophenol	130	0	42 - 124	S	%REC	1	08/29/11 01:35 AM
Surr: 2,4,6-Tribromophenol	110	0	42 - 124		%REC	1	09/09/11 02:43 PM
Surr: 2-Fluorobiphenyl	104	0	50 - 110		%REC	1	08/29/11 01:35 AM
Surr: 2-Fluorobiphenyl	78.8	0	50 - 110		%REC	1	09/09/11 02:43 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-035-0811
Lab ID: 1108185-02
Collection Date: 08/17/11 01:13 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	79.2	0	20 - 110		%REC	1	09/09/11 02:43 PM
Surr: 2-Fluorophenol	80.8	0	20 - 110		%REC	1	08/29/11 01:35 AM
Surr: 4-Terphenyl-d14	120	0	51 - 135		%REC	1	08/29/11 01:35 AM
Surr: 4-Terphenyl-d14	86.2	0	51 - 135		%REC	1	09/09/11 02:43 PM
Surr: Nitrobenzene-d5	113	0	41 - 110	S	%REC	1	08/29/11 01:35 AM
Surr: Nitrobenzene-d5	112	0	41 - 110	S	%REC	1	09/09/11 02:43 PM
Surr: Phenol-d6	51.3	0	20 - 115		%REC	1	08/29/11 01:35 AM
Surr: Phenol-d6	47.8	0	20 - 115		%REC	1	09/09/11 02:43 PM
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:08 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:08 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:08 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 08:08 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:08 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 08:08 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:08 PM
2-Chloroethylvinylether	~~<0.00500~~	~~0.00500~~	~~0.0150~~	R	mg/L	1	08/24/11 08:08 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:08 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:08 PM
Acetone	0.00544	0.00500	0.0150	J	mg/L	1	08/24/11 08:08 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 08:08 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-035-0811
Lab ID: 1108185-02
Collection Date: 08/17/11 01:13 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:08 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 08:08 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:08 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:08 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 08:08 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:08 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:08 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:08 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:08 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:08 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:08 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 08:08 PM
Surr: 1,2-Dichloroethane-d4	105	0	70 - 120		%REC	1	08/24/11 08:08 PM
Surr: 4-Bromofluorobenzene	104	0	75 - 120		%REC	1	08/24/11 08:08 PM
Surr: Dibromofluoromethane	105	0	85 - 115		%REC	1	08/24/11 08:08 PM
Surr: Toluene-d8	99.6	0	85 - 120		%REC	1	08/24/11 08:08 PM
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	1210	30.0	100		mg/L	100	08/18/11 01:55 PM
Sulfate	6530	100	300		mg/L	100	08/18/11 01:55 PM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	178	10.0	20.0		mg/L	1	08/18/11 02:53 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/18/11 02:53 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/18/11 02:53 PM
Alkalinity, Total (As CaCO3)	178	10.0	20.0		mg/L	1	08/18/11 02:53 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-HMW-035-0811
Lab ID: 1108185-02
Collection Date: 08/17/11 01:13 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
pH		**M4500-H+ B**					**Analyst: JBC**
pH	7.36	0	0		pH Units	1	08/18/11 02:05 PM
Total Organic Carbon		**M5310C**					**Analyst: TGK**
Total Organic Carbon	0.526	0.300	1.00	J	mg/L	1	08/19/11 01:04 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-TB-0811
Lab ID: 1108185-03
Collection Date: 08/17/11 01:13 PM
Matrix: Trip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:32 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:32 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:32 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 08:32 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:32 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 08:32 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:32 PM
2-Chloroethylvinylether	~~<0.00500~~	~~0.00500~~	~~0.0150~~	R	mg/L	1	08/24/11 08:32 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:32 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:32 PM
Acetone	0.00834	0.00500	0.0150	J	mg/L	1	08/24/11 08:32 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 08:32 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:32 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108185

Client Sample ID: HLSF-3839-TB-0811
Lab ID: 1108185-03
Collection Date: 08/17/11 01:13 PM
Matrix: Trip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 08:32 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:32 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:32 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 08:32 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:32 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:32 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:32 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:32 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:32 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:32 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 08:32 PM
Surr: 1,2-Dichloroethane-d4	103	0	70 - 120		%REC	1	08/24/11 08:32 PM
Surr: 4-Bromofluorobenzene	105	0	75 - 120		%REC	1	08/24/11 08:32 PM
Surr: Dibromofluoromethane	103	0	85 - 115		%REC	1	08/24/11 08:32 PM
Surr: Toluene-d8	99.1	0	85 - 120		%REC	1	08/24/11 08:32 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

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Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 51625

CHAIN-OF-CUSTODY

CLIENT: ZIA ENGINEERING
ADDRESS: 755 S. TYSON BLVD SUITE G2 201 80911
PHONE: 575 532-1526 FAX/E-MAIL:
DATA REPORTED TO:
ADDITIONAL REPORT COPIES TO:

DATE: PAGE OF
PO #: DHL WORK ORDER #: 1108185
PROJECT LOCATION OR NAME:
CLENT PROJECT #: COLLECTOR:

Authorize 5% surcharge for TRRP Report? ☐ Yes ☐ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOIL

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4	NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐ (METHOD 8021)	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO (METHOD 8015) ☐ DRO (METHOD 8015) ☐	VOC 8260/5035 ☐ VOC 624 ☐ VOC 8260/5035 ☐	SVOC 8270 ☐ PAH 8270D ☐ HOLD PAH ☐ SVOC 625 ☐	8081 PEST ☐ 608 PEST/PCB ☐ 8082 PCB ☐ 8270 PEST ☐	8270 O-P PEST ☐ 8270 PCB ☐	8321 HERB ☐ 8330 EXPL ☐ PERCHLORATE ☐	METALS 6020 ☐ METALS 200.8 ☐ DISS METALS ☐	RCRA ☐ TX1 ☐	CEC ☐ HEX CHROM ☐ ALKALINITY ☐	CHLORIDE ☐ ANIONS ☐	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-1 ☐ PB ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	TOC	FIELD NOTES
HSF-3838-HMW-034-0811	01	8-17-11	1145	W		16								X	X	X				X		X	X							X	
HSF-3839-HMW-035-0811	02	8-17-11	1313	W		16								X	X	X				X		X	X							X	
HSF-3839-HMW-035-0811 MS/MSD	02	8-17-11	1313	W		16								X	X	X				X		X	X							X	
HSF-3839-TB-0811	03	8-17-11	1313	W		2									X																
TOTAL																															

RELINQUISHED BY: (Signature) DATE/TIME 8-17-11 1530 RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) Fedex DATE/TIME 8/18/11 1030 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 3.5 THERM #: 57
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #:
☐ APC DELIVERY
☐ HAND DELIVERED

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-008-0811
Lab ID: 1108207-01
Collection Date: 08/19/11 11:24 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		**M8015D**					**Analyst: DO**
TPH-DRO C10-C28	<0.0500	0.0500	0.100		mg/L	1	08/25/11 10:41 AM
Surr: Isopropylbenzene	66.9	0	47 - 142		%REC	1	08/25/11 10:41 AM
Surr: Octacosane	120	0	51 - 124		%REC	1	08/25/11 10:41 AM
Method 8015 Gasoline (GRO)		**M8015V**					**Analyst: DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	08/23/11 01:30 PM
Surr: Tetrachlorethene	98.5	0	74 - 138		%REC	1	08/23/11 01:30 PM
Mercury Filtered (0.45µ)		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/26/11 01:31 PM
Total Mercury: Aqueous		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/26/11 01:14 PM
Dissolved Metals-ICPMS (0.45µ)		**SW6020**					**Analyst: AJR**
Arsenic	0.0102	0.00200	0.00600		mg/L	1	08/25/11 03:42 PM
Barium	0.00852	0.00300	0.0100	J	mg/L	1	08/25/11 03:42 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 03:42 PM
Calcium	467	20.0	60.0		mg/L	200	08/26/11 04:12 PM
Chromium	0.0114	0.00200	0.00600		mg/L	1	08/25/11 03:42 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 03:42 PM
Magnesium	664	20.0	60.0		mg/L	200	08/26/11 04:12 PM
Potassium	66.0	20.0	60.0		mg/L	200	08/26/11 04:12 PM
Selenium	0.0673	0.00200	0.00600		mg/L	1	08/25/11 03:42 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/25/11 03:42 PM
Sodium	2460	20.0	60.0		mg/L	200	08/26/11 04:12 PM
Trace Metals: ICP-MS - Water		**SW6020**					**Analyst: AJR**
Arsenic	0.0103	0.00200	0.00600		mg/L	1	08/25/11 06:04 PM
Barium	0.00940	0.00300	0.0100	J	mg/L	1	08/25/11 06:04 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 06:04 PM
Calcium	464	20.0	60.0		mg/L	200	08/26/11 04:25 PM
Chromium	0.0119	0.00200	0.00600		mg/L	1	08/25/11 06:04 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 06:04 PM
Magnesium	645	20.0	60.0		mg/L	200	08/26/11 04:25 PM
Potassium	65.2	20.0	60.0		mg/L	200	08/26/11 04:25 PM
Selenium	0.0621	0.00200	0.00600		mg/L	1	08/25/11 06:04 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/25/11 06:04 PM
Sodium	2400	20.0	60.0		mg/L	200	08/26/11 04:25 PM
Semivolatiles by GC/MS - Water		**SW8270C**					**Analyst: DO**
1,2,4,5-Tetrachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
1,2,4-Trichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
1,2-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
1,2-Diphenylhydrazine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
1,3-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
1,4-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
1-Chloronaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 06:59 PM
1-Methylnaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	08/29/11 02:00 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-008-0811
Lab ID: 1108207-01
Collection Date: 08/19/11 11:24 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
1-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
2,4,5-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2,4,6-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2,4-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2,4-Dimethylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2,4-Dinitrophenol	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 02:00 AM
2,4-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2,6-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2,6-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2-Chloronaphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2-Chlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2-Methylnaphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
2-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2-Nitrophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
2-Picoline	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
3,3'-Dichlorobenzidine	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 02:00 AM
3-Methylcholanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
3-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
4,6-Dinitro-2-methylphenol	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 02:00 AM
4-Aminobiphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
4-Bromophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
4-Chloro-3-methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
4-Chloroaniline	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 02:00 AM
4-Chlorophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
4-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
4-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
4-Nitrophenol	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 02:00 AM
7,12-Dimethylbenz(a)anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
Acenaphthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Acenaphthylene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Acetophenone	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Aniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Benzidine	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:00 AM
Benzo[a]anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Benzo[a]pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Benzo[b]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Benzo[g,h,i]perylene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Benzo[k]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Benzoic acid	0.006 ~~0.00240~~	0.00200	0.00600	~~B~~ UB	mg/L	1	08/29/11 02:00 AM
Benzyl alcohol	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 02:00 AM
Biphenyl	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Bis(2-chloroethoxy)methane	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-008-0811
Lab ID: 1108207-01
Collection Date: 08/19/11 11:24 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Bis(2-chloroisopropyl)ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Bis(2-ethylhexyl)phthalate	<0.00100	0.00100	0.00300		mg/L	1	08/29/11 02:00 AM
Butyl benzyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:00 AM
Carbazole	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Chrysene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Di-n-butyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:00 AM
Di-n-octyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:00 AM
Dibenz(a,j)acridine	<0.00100	0.00100	0.00400	N	mg/L	1	09/09/11 06:59 PM
Dibenz[a,h]anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Dibenzofuran	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Diethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:00 AM
Dimethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:00 AM
Dimethylphenethylamine	<0.00200	0.00200	0.00600		mg/L	1	09/09/11 06:59 PM
Diphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
Ethyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
Fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Fluorene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Hexachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Hexachlorobutadiene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Hexachlorocyclopentadiene	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 02:00 AM
Hexachloroethane	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Indeno[1,2,3-cd]pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Isophorone	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Methyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
N-Nitrosodi-n-propylamine	<0.000100	0.000100	0.000800		mg/L	1	08/29/11 02:00 AM
N-Nitrosodimethylamine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
N-Nitrosodiphenylamine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
N-Nitrosopiperidine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
Naphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Nitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
p-Dimethylaminoazobenzene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 06:59 PM
Pentachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Pentachloronitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
Pentachlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Phenacetin	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
Phenanthrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Phenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Pronamide	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 06:59 PM
Pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:00 AM
Pyridine	<0.000800	0.000800	0.00200		mg/L	1	08/29/11 02:00 AM
Surr: 2,4,6-Tribromophenol	120	0	42 - 124		%REC	1	09/09/11 06:59 PM
Surr: 2,4,6-Tribromophenol	126	0	42 - 124	S	%REC	1	08/29/11 02:00 AM
Surr: 2-Fluorobiphenyl	105	0	50 - 110		%REC	1	08/29/11 02:00 AM
Surr: 2-Fluorobiphenyl	87.5	0	50 - 110		%REC	1	09/09/11 06:59 PM

Qualifiers:

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B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-008-0811
Lab ID: 1108207-01
Collection Date: 08/19/11 11:24 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	73.2	0	20 - 110		%REC	1	08/29/11 02:00 AM
Surr: 2-Fluorophenol	82.8	0	20 - 110		%REC	1	09/09/11 06:59 PM
Surr: 4-Terphenyl-d14	116	0	51 - 135		%REC	1	08/29/11 02:00 AM
Surr: 4-Terphenyl-d14	87.5	0	51 - 135		%REC	1	09/09/11 06:59 PM
Surr: Nitrobenzene-d5	117	0	41 - 110	S	%REC	1	09/09/11 06:59 PM
Surr: Nitrobenzene-d5	109	0	41 - 110		%REC	1	08/29/11 02:00 AM
Surr: Phenol-d6	50.5	0	20 - 115		%REC	1	09/09/11 06:59 PM
Surr: Phenol-d6	43.5	0	20 - 115		%REC	1	08/29/11 02:00 AM
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:56 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:56 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:56 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 08:56 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 08:56 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 08:56 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:56 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:56 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:56 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:56 PM
Acetone	0.00515	0.00500	0.0150	J	mg/L	1	08/24/11 08:56 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 08:56 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM

Qualifiers:

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B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-008-0811
Lab ID: 1108207-01
Collection Date: 08/19/11 11:24 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:56 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 08:56 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:56 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:56 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 08:56 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 08:56 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 08:56 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:56 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 08:56 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Trichloroethene	0.000820	0.000600	0.00200	J	mg/L	1	08/24/11 08:56 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 08:56 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 08:56 PM
Surr: 1,2-Dichloroethane-d4	104	0	70 - 120		%REC	1	08/24/11 08:56 PM
Surr: 4-Bromofluorobenzene	105	0	75 - 120		%REC	1	08/24/11 08:56 PM
Surr: Dibromofluoromethane	102	0	85 - 115		%REC	1	08/24/11 08:56 PM
Surr: Toluene-d8	98.7	0	85 - 120		%REC	1	08/24/11 08:56 PM
Total Organic Carbon		**M5310C**					**Analyst: TGK**
Total Organic Carbon	1.15	0.300	1.00		mg/L	1	08/23/11 02:39 PM

Qualifiers:

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B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-032-0811
Lab ID: 1108207-02
Collection Date: 08/19/11 01:35 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		**M8015D**					**Analyst: DO**
TPH-DRO C10-C28	<0.0500	0.0500	0.100		mg/L	1	08/25/11 10:50 AM
Surr: Isopropylbenzene	64.8	0	47 - 142		%REC	1	08/25/11 10:50 AM
Surr: Octacosane	117	0	51 - 124		%REC	1	08/25/11 10:50 AM
Method 8015 Gasoline (GRO)		**M8015V**					**Analyst: DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	08/23/11 01:56 PM
Surr: Tetrachlorethene	96.2	0	74 - 138		%REC	1	08/23/11 01:56 PM
Mercury Filtered (0.45µ)		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/26/11 01:33 PM
Total Mercury: Aqueous		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/26/11 01:16 PM
Dissolved Metals-ICPMS (0.45µ)		**SW6020**					**Analyst: AJR**
Arsenic	0.00203	0.00200	0.00600	J	mg/L	1	08/25/11 03:48 PM
Barium	0.0165	0.00300	0.0100		mg/L	1	08/25/11 03:48 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 03:48 PM
Calcium	478	10.0	30.0		mg/L	100	08/26/11 04:42 PM
Chromium	0.0345	0.00200	0.00600		mg/L	1	08/25/11 03:48 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 03:48 PM
Magnesium	250	10.0	30.0		mg/L	100	08/26/11 04:42 PM
Potassium	49.2	10.0	30.0		mg/L	100	08/26/11 04:42 PM
Selenium	0.0561	0.00200	0.00600		mg/L	1	08/25/11 03:48 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/25/11 03:48 PM
Sodium	2230	10.0	30.0		mg/L	100	08/26/11 04:42 PM
Trace Metals: ICP-MS - Water		**SW6020**					**Analyst: AJR**
Arsenic	<0.00200	0.00200	0.00600		mg/L	1	08/25/11 06:10 PM
Barium	0.0185	0.00300	0.0100		mg/L	1	08/25/11 06:10 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 06:10 PM
Calcium	476	10.0	30.0		mg/L	100	08/26/11 04:48 PM
Chromium	0.0352	0.00200	0.00600		mg/L	1	08/25/11 06:10 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/25/11 06:10 PM
Magnesium	251	10.0	30.0		mg/L	100	08/26/11 04:48 PM
Potassium	48.8	10.0	30.0		mg/L	100	08/26/11 04:48 PM
Selenium	0.0539	0.00200	0.00600		mg/L	1	08/25/11 06:10 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/25/11 06:10 PM
Sodium	2240	10.0	30.0		mg/L	100	08/26/11 04:48 PM
Semivolatiles by GC/MS - Water		**SW8270C**					**Analyst: DO**
1,2,4,5-Tetrachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
1,2,4-Trichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
1,2-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
1,2-Diphenylhydrazine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
1,3-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
1,4-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
1-Chloronaphthalene	<0.000200	0.000200	0.000800	~~N~~	mg/L	1	09/09/11 04:36 PM
1-Methylnaphthalene	<0.000200	0.000200	0.000800	~~N~~	mg/L	1	08/29/11 02:24 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-032-0811
Lab ID: 1108207-02
Collection Date: 08/19/11 01:35 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
1-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
2,4,5-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2,4,6-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2,4-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2,4-Dimethylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2,4-Dinitrophenol	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 02:24 AM
2,4-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2,6-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2,6-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2-Chloronaphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2-Chlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2-Methylnaphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
2-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2-Nitrophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
2-Picoline	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
3,3'-Dichlorobenzidine	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 02:24 AM
3-Methylcholanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
3-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
4,6-Dinitro-2-methylphenol	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 02:24 AM
4-Aminobiphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
4-Bromophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
4-Chloro-3-methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
4-Chloroaniline	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 02:24 AM
4-Chlorophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
4-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
4-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
4-Nitrophenol	<0.00100	0.00100	0.00400		mg/L	1	08/29/11 02:24 AM
7,12-Dimethylbenz(a)anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
Acenaphthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Acenaphthylene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Acetophenone	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Aniline	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Benzidine	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:24 AM
Benzo[a]anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Benzo[a]pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Benzo[b]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Benzo[g,h,i]perylene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Benzo[k]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Benzoic acid	0.0119	0.00200	0.00600	~~B~~ UB	mg/L	1	08/29/11 02:24 AM
Benzyl alcohol	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 02:24 AM
Biphenyl	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Bis(2-chloroethoxy)methane	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-032-0811
Lab ID: 1108207-02
Collection Date: 08/19/11 01:35 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Bis(2-chloroisopropyl)ether	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Bis(2-ethylhexyl)phthalate	<0.00100	0.00100	0.00300		mg/L	1	08/29/11 02:24 AM
Butyl benzyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:24 AM
Carbazole	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Chrysene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Di-n-butyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:24 AM
Di-n-octyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:24 AM
Dibenz(a,j)acridine	<0.00100	0.00100	0.00400	N	mg/L	1	09/09/11 04:36 PM
Dibenz[a,h]anthracene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Dibenzofuran	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Diethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:24 AM
Dimethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	08/29/11 02:24 AM
Dimethylphenethylamine	<0.00200	0.00200	0.00600		mg/L	1	09/09/11 04:36 PM
Diphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
Ethyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
Fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Fluorene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Hexachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Hexachlorobutadiene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Hexachlorocyclopentadiene	<0.000600	0.000600	0.00200		mg/L	1	08/29/11 02:24 AM
Hexachloroethane	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Indeno[1,2,3-cd]pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Isophorone	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Methyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
N-Nitrosodi-n-propylamine	<0.000100	0.000100	0.000800		mg/L	1	08/29/11 02:24 AM
N-Nitrosodimethylamine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
N-Nitrosodiphenylamine	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
N-Nitrosopiperidine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
Naphthalene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Nitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
p-Dimethylaminoazobenzene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 04:36 PM
Pentachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Pentachloronitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
Pentachlorophenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Phenacetin	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
Phenanthrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Phenol	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Pronamide	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 04:36 PM
Pyrene	<0.000200	0.000200	0.000800		mg/L	1	08/29/11 02:24 AM
Pyridine	<0.000800	0.000800	0.00200		mg/L	1	08/29/11 02:24 AM
Surr: 2,4,6-Tribromophenol	126	0	42 - 124	S	%REC	1	08/29/11 02:24 AM
Surr: 2,4,6-Tribromophenol	118	0	42 - 124		%REC	1	09/09/11 04:36 PM
Surr: 2-Fluorobiphenyl	104	0	50 - 110		%REC	1	08/29/11 02:24 AM
Surr: 2-Fluorobiphenyl	73.5	0	50 - 110		%REC	1	09/09/11 04:36 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-032-0811
Lab ID: 1108207-02
Collection Date: 08/19/11 01:35 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	72.2	0	20 - 110		%REC	1	09/09/11 04:36 PM
Surr: 2-Fluorophenol	81.5	0	20 - 110		%REC	1	08/29/11 02:24 AM
Surr: 4-Terphenyl-d14	124	0	51 - 135		%REC	1	08/29/11 02:24 AM
Surr: 4-Terphenyl-d14	89.5	0	51 - 135		%REC	1	09/09/11 04:36 PM
Surr: Nitrobenzene-d5	108	0	41 - 110		%REC	1	08/29/11 02:24 AM
Surr: Nitrobenzene-d5	110	0	41 - 110		%REC	1	09/09/11 04:36 PM
Surr: Phenol-d6	55.0	0	20 - 115		%REC	1	08/29/11 02:24 AM
Surr: Phenol-d6	40.8	0	20 - 115		%REC	1	09/09/11 04:36 PM
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 09:20 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 09:20 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 09:20 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 09:20 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 09:20 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 09:20 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:20 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:20 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:20 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:20 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:20 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 09:20 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-032-0811
Lab ID: 1108207-02
Collection Date: 08/19/11 01:35 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:20 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 09:20 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:20 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 09:20 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 09:20 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:20 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:20 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 09:20 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 09:20 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 09:20 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:20 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 09:20 PM
Surr: 1,2-Dichloroethane-d4	104	0	70 - 120		%REC	1	08/24/11 09:20 PM
Surr: 4-Bromofluorobenzene	103	0	75 - 120		%REC	1	08/24/11 09:20 PM
Surr: Dibromofluoromethane	104	0	85 - 115		%REC	1	08/24/11 09:20 PM
Surr: Toluene-d8	99.1	0	85 - 120		%REC	1	08/24/11 09:20 PM
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	1600	30.0	100		mg/L	100	08/22/11 11:31 AM
Sulfate	5690	100	300		mg/L	100	08/22/11 11:31 AM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	48.1	10.0	20.0		mg/L	1	08/22/11 11:41 AM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/22/11 11:41 AM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/22/11 11:41 AM
Alkalinity, Total (As CaCO3)	48.1	10.0	20.0		mg/L	1	08/22/11 11:41 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-HMW-032-0811
Lab ID: 1108207-02
Collection Date: 08/19/11 01:35 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
pH		**M4500-H+ B**					**Analyst: JBC**
pH	7.16	0	0		pH Units	1	08/22/11 10:34 AM
Total Organic Carbon		**M5310C**					**Analyst: TGK**
Total Organic Carbon	0.983	0.300	1.00	J	mg/L	1	08/23/11 04:09 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-TB-0811
Lab ID: 1108207-03
Collection Date: 08/19/11 01:35 PM
Matrix: Trip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 09:44 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 09:44 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 09:44 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 09:44 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 09:44 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 09:44 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:44 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:44 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:44 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:44 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:44 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 09:44 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:44 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108207

Client Sample ID: HLSF-3839-TB-0811
Lab ID: 1108207-03
Collection Date: 08/19/11 01:35 PM
Matrix: Trip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 09:44 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:44 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 09:44 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 09:44 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 09:44 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 09:44 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 09:44 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 09:44 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 09:44 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 09:44 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 09:44 PM
Surr: 1,2-Dichloroethane-d4	104	0	70 - 120		%REC	1	08/24/11 09:44 PM
Surr: 4-Bromofluorobenzene	104	0	75 - 120		%REC	1	08/24/11 09:44 PM
Surr: Dibromofluoromethane	104	0	85 - 115		%REC	1	08/24/11 09:44 PM
Surr: Toluene-d8	98.4	0	85 - 120		%REC	1	08/24/11 09:44 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL ANALYTICAL
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Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 51626
CHAIN-OF-CUSTODY

CLIENT: ZTA ENGINEERING
ADDRESS: 755 S. TELSHOR BLVD SUITE Q201 88011
PHONE: (575) 532-1526 FAX/E-MAIL:
DATA REPORTED TO:
ADDITIONAL REPORT COPIES TO:

DATE: PAGE OF
PO #: DHL WORK ORDER #: 1108207
PROJECT LOCATION OR NAME:
CLENT PROJECT #: COLLECTOR:

Authorize 5% surcharge for TRRP Report? ☐ Yes ☐ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ (METHOD 8021) TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ GRO (METHOD 8015) ☐ DRO (METHOD 8015) ☐ VOC 8260 ☐ SVOC 8270 ☐ PAH 8270 ☐ VOC 624 ☐ VOC 8260/5035 ☐ HOLD PAH ☐ SVOC 625 ☐ 8081 PEST ☐ 608 PEST/PCB ☐ 8270 PEST ☐ 8270 PCB ☐ 8270 C-P PEST ☐ 8082 PCB ☐ 8270 EXPL ☐ PERCHLORATE ☐ 8321 HERB ☐ 8330 EXPL ☐ METALS 2008 ☐ DISS. METALS ☐ METALS 6020 ☐ RCRA ☐ TX11 ☐ PH ☐ HEX CHROM ☐ CHLORIDE ☐ (ANIONS) ALKALINITY ☐ TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ RCI ☐ TOX ☐ FLASHPOINT ☐ TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4	NaOH	ICE	UNPRESERVED	BTEX	MTBE	TPH 1005	TPH 1006	GRO	DRO	VOC 8260	SVOC 8270	PAH 8270	VOC 624	VOC 8260/5035	8081 PEST	608 PEST/PCB	8270 PEST	8270 PCB	8082 PCB	8270 C-P PEST	8321 HERB	8330 EXPL	METALS 2008	METALS 6020	RCRA	TX11	PH	HEX CHROM	CHLORIDE	ALKALINITY	TCLP-SVOC	TCLP-METALS	VOC	PEST	HERB	RCI	RCRA 8	TX-11	TOX	Pb	FLASHPOINT	TDS	TSS	% MOISTURE	CYANIDE	FIELD NOTES
HLSF-3839-HW-08-0811	01	8-19-11	1124	W		16									X	X	X												X						X	X																		X	Hold 24 Bacteria 03 8/22
HLSF-3839-HW2-082-08	02	8-19-11	1335	W		16									X	X	X												X						X	X																		X	
HLSF-3839-TB-0811	03	8-19-11	1335	W		2										X																																							
TOTAL																																																							

RELINQUISHED BY: (Signature) DATE/TIME 8-19-11 1330 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME 8/20/11 1130 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 5.7 THERM #: 57
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #:
☐ APC DELIVERY
☐ HAND DELIVERED

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-008-0811
Lab ID: 1108232-01
Collection Date: 08/23/11 10:52 AM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	1420	30.0	100		mg/L	100	08/24/11 12:08 PM
Sulfate	8340	100	300		mg/L	100	08/24/11 12:08 PM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	248	10.0	20.0		mg/L	1	08/25/11 10:48 AM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 10:48 AM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 10:48 AM
Alkalinity, Total (As CaCO3)	248	10.0	20.0		mg/L	1	08/25/11 10:48 AM
pH		**M4500-H+ B**					**Analyst: JBC**
pH	7.38	0	0		pH Units	1	08/24/11 11:14 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-059-0811
Lab ID: 1108232-02
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		**M8015D**					**Analyst: DO**
TPH-DRO C10-C28	<0.0500	0.0500	0.100		mg/L	1	08/30/11 09:19 AM
Surr: Isopropylbenzene	62.1	0	47 - 142		%REC	1	08/30/11 09:19 AM
Surr: Octacosane	122	0	51 - 124		%REC	1	08/30/11 09:19 AM
Method 8015 Gasoline (GRO)		**M8015V**					**Analyst: DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	08/24/11 07:17 PM
Surr: Tetrachlorethene	102	0	74 - 138		%REC	1	08/24/11 07:17 PM
Mercury Filtered (0.45µ)		**SW7470A**					**Analyst: LM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/11 12:33 PM
Total Mercury: Aqueous		**SW7470A**					**Analyst: LM**
Mercury	0.0000650	0.0000600	0.000200	J	mg/L	1	08/31/11 12:31 PM
Dissolved Metals-ICPMS (0.45µ)		**SW6020**					**Analyst: AJR**
Arsenic	0.0121	0.00200	0.00600		mg/L	1	08/30/11 05:03 PM
Barium	0.00983	0.00300	0.0100	J	mg/L	1	08/30/11 05:03 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:03 PM
Calcium	507	10.0	30.0		mg/L	100	08/31/11 01:34 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/30/11 05:03 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:03 PM
Magnesium	590	10.0	30.0		mg/L	100	08/31/11 01:34 PM
Potassium	59.2	10.0	30.0		mg/L	100	08/31/11 01:34 PM
Selenium	0.0265	0.00200	0.00600		mg/L	1	08/30/11 05:03 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/30/11 05:03 PM
Sodium	2620	10.0	30.0		mg/L	100	08/31/11 01:34 PM
Trace Metals: ICP-MS - Water		**SW6020**					**Analyst: AJR**
Arsenic	0.0122	0.00200	0.00600		mg/L	1	08/30/11 05:38 PM
Barium	0.0104	0.00300	0.0100		mg/L	1	08/30/11 05:38 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:38 PM
Calcium	476	10.0	30.0		mg/L	100	08/31/11 02:03 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/30/11 05:38 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:38 PM
Magnesium	549	10.0	30.0		mg/L	100	08/31/11 02:03 PM
Potassium	53.1	10.0	30.0		mg/L	100	08/31/11 02:03 PM
Selenium	0.0267	0.00200	0.00600		mg/L	1	08/30/11 05:38 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/30/11 05:38 PM
Sodium	2460	10.0	30.0		mg/L	100	08/31/11 02:03 PM
Semivolatiles by GC/MS - Water		**SW8270C**					**Analyst: DO**
1,2,4,5-Tetrachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
1,2,4-Trichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
1,2-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
1,2-Diphenylhydrazine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
1,3-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
1,4-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
1-Chloronaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 01:56 PM
1-Methylnaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/07/11 06:04 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-059-0811
Lab ID: 1108232-02
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
1-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
2,4,5-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2,4,6-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2,4-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2,4-Dimethylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2,4-Dinitrophenol	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:04 PM
2,4-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2,6-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2,6-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2-Chloronaphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2-Chlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2-Methylnaphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
2-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2-Nitrophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
2-Picoline	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
3,3'-Dichlorobenzidine	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:04 PM
3-Methylcholanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
3-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
4,6-Dinitro-2-methylphenol	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:04 PM
4-Aminobiphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
4-Bromophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
4-Chloro-3-methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
4-Chloroaniline	<0.000600	0.000600	0.00200	J	mg/L	1	09/07/11 06:04 PM
4-Chlorophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
4-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
4-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
4-Nitrophenol	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:04 PM
7,12-Dimethylbenz(a)anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
Acenaphthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Acenaphthylene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Acetophenone	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Aniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Benzidine	<0.00200	0.00200	0.00600	J	mg/L	1	09/07/11 06:04 PM
Benzo[a]anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Benzo[a]pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Benzo[b]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Benzo[g,h,i]perylene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Benzo[k]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Benzoic acid	0.006 ~~0.00404~~	0.00200	0.00600	~~J~~ UB	mg/L	1	09/07/11 06:04 PM
Benzyl alcohol	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:04 PM
Biphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Bis(2-chloroethoxy)methane	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM

Qualifiers:

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B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-059-0811
Lab ID: 1108232-02
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Bis(2-chloroisopropyl)ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Bis(2-ethylhexyl)phthalate	<0.00100	0.00100	0.00300		mg/L	1	09/07/11 06:04 PM
Butyl benzyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:04 PM
Carbazole	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Chrysene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Di-n-butyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:04 PM
Di-n-octyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:04 PM
Dibenz(a,j)acridine	<0.00100	0.00100	0.00400	N	mg/L	1	09/09/11 01:56 PM
Dibenz[a,h]anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Dibenzofuran	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Diethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:04 PM
Dimethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:04 PM
Dimethylphenethylamine	<0.00200	0.00200	0.00600	J	mg/L	1	09/09/11 01:56 PM
Diphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
Ethyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
Fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Fluorene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Hexachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Hexachlorobutadiene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Hexachlorocyclopentadiene	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:04 PM
Hexachloroethane	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Indeno[1,2,3-cd]pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Isophorone	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Methyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
N-Nitrosodi-n-propylamine	<0.000100	0.000100	0.000800		mg/L	1	09/07/11 06:04 PM
N-Nitrosodimethylamine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
N-Nitrosodiphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
N-Nitrosopiperidine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
Naphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Nitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
p-Dimethylaminoazobenzene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 01:56 PM
Pentachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Pentachloronitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
Pentachlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Phenacetin	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
Phenanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Phenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Pronamide	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:56 PM
Pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:04 PM
Pyridine	<0.000800	0.000800	0.00200		mg/L	1	09/07/11 06:04 PM
Surr: 2,4,6-Tribromophenol	138	0	42 - 124	S	%REC	1	09/09/11 01:56 PM
Surr: 2,4,6-Tribromophenol	110	0	42 - 124		%REC	1	09/07/11 06:04 PM
Surr: 2-Fluorobiphenyl	91.5	0	50 - 110		%REC	1	09/09/11 01:56 PM
Surr: 2-Fluorobiphenyl	91.8	0	50 - 110		%REC	1	09/07/11 06:04 PM

Qualifiers:

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B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-059-0811
Lab ID: 1108232-02
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	70.8	0	20 - 110		%REC	1	09/07/11 06:04 PM
Surr: 2-Fluorophenol	93.5	0	20 - 110		%REC	1	09/09/11 01:56 PM
Surr: 4-Terphenyl-d14	109	0	51 - 135		%REC	1	09/09/11 01:56 PM
Surr: 4-Terphenyl-d14	120	0	51 - 135		%REC	1	09/07/11 06:04 PM
Surr: Nitrobenzene-d5	135	0	41 - 110	S	%REC	1	09/09/11 01:56 PM
Surr: Nitrobenzene-d5	103	0	41 - 110		%REC	1	09/07/11 06:04 PM
Surr: Phenol-d6	61.0	0	20 - 115		%REC	1	09/09/11 01:56 PM
Surr: Phenol-d6	46.2	0	20 - 115		%REC	1	09/07/11 06:04 PM
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:08 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:08 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:08 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 10:08 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:08 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 10:08 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:08 PM
2-Chloroethylvinylether	~~<0.00500~~	~~0.00500~~	~~0.0150~~	R	mg/L	1	08/24/11 10:08 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:08 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:08 PM
Acetone 0.0150	~~0.00795~~	0.00500	0.0150	J UB	mg/L	1	08/24/11 10:08 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 10:08 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM

Qualifiers:

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B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-059-0811
Lab ID: 1108232-02
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:08 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 10:08 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:08 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:08 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 10:08 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:08 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:08 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:08 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:08 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:08 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:08 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 10:08 PM
Surr: 1,2-Dichloroethane-d4	106	0	70 - 120		%REC	1	08/24/11 10:08 PM
Surr: 4-Bromofluorobenzene	103	0	75 - 120		%REC	1	08/24/11 10:08 PM
Surr: Dibromofluoromethane	105	0	85 - 115		%REC	1	08/24/11 10:08 PM
Surr: Toluene-d8	99.9	0	85 - 120		%REC	1	08/24/11 10:08 PM
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	1140	30.0	100		mg/L	100	08/24/11 12:19 PM
Sulfate	7850	100	300		mg/L	100	08/24/11 12:19 PM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	180	10.0	20.0		mg/L	1	08/25/11 11:05 AM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 11:05 AM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 11:05 AM
Alkalinity, Total (As CaCO3)	180	10.0	20.0		mg/L	1	08/25/11 11:05 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-059-0811
Lab ID: 1108232-02
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
pH		**M4500-H+ B**					**Analyst: JBC**
pH	7.63	0	0		pH Units	1	08/24/11 11:16 AM
Total Organic Carbon		**M5310C**					**Analyst: TGK**
Total Organic Carbon	1.06	0.300	1.00	UB	mg/L	1	08/25/11 12:45 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-159-0811
Lab ID: 1108232-03
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		**M8015D**					**Analyst: DO**
TPH-DRO C10-C28	<0.0500	0.0500	0.100		mg/L	1	08/30/11 09:28 AM
Surr: Isopropylbenzene	63.9	0	47 - 142		%REC	1	08/30/11 09:28 AM
Surr: Octacosane	128	0	51 - 124	S	%REC	1	08/30/11 09:28 AM
Method 8015 Gasoline (GRO)		**M8015V**					**Analyst: DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	08/24/11 07:42 PM
Surr: Tetrachlorethene	99.8	0	74 - 138		%REC	1	08/24/11 07:42 PM
Mercury Filtered (0.45µ)		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/31/11 12:39 PM
Total Mercury: Aqueous		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/31/11 12:21 PM
Dissolved Metals-ICPMS (0.45µ)		**SW6020**					**Analyst: AJR**
Arsenic	0.0118	0.00200	0.00600		mg/L	1	08/30/11 05:26 PM
Barium	0.00957	0.00300	0.0100	J	mg/L	1	08/30/11 05:26 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:26 PM
Calcium	486	10.0	30.0		mg/L	100	08/31/11 01:58 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/30/11 05:26 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:26 PM
Magnesium	557	10.0	30.0		mg/L	100	08/31/11 01:58 PM
Potassium	54.2	10.0	30.0		mg/L	100	08/31/11 01:58 PM
Selenium	0.0270	0.00200	0.00600		mg/L	1	08/30/11 05:26 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/30/11 05:26 PM
Sodium	2490	10.0	30.0		mg/L	100	08/31/11 01:58 PM
Trace Metals: ICP-MS - Water		**SW6020**					**Analyst: AJR**
Arsenic	0.0115	0.00200	0.00600		mg/L	1	08/30/11 05:44 PM
Barium	0.00970	0.00300	0.0100	J	mg/L	1	08/30/11 05:44 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:44 PM
Calcium	468	10.0	30.0		mg/L	100	08/31/11 02:10 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/30/11 05:44 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:44 PM
Magnesium	547	10.0	30.0		mg/L	100	08/31/11 02:10 PM
Potassium	53.8	10.0	30.0		mg/L	100	08/31/11 02:10 PM
Selenium	0.0253	0.00200	0.00600		mg/L	1	08/30/11 05:44 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/30/11 05:44 PM
Sodium	2410	10.0	30.0		mg/L	100	08/31/11 02:10 PM
Semivolatiles by GC/MS - Water		**SW8270C**					**Analyst: DO**
1,2,4,5-Tetrachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
1,2,4-Trichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
1,2-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
1,2-Diphenylhydrazine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
1,3-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
1,4-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
1-Chloronaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 01:33 PM
1-Methylnaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/07/11 06:28 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-159-0811
Lab ID: 1108232-03
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
1-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
2,4,5-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2,4,6-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2,4-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2,4-Dimethylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2,4-Dinitrophenol	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:28 PM
2,4-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2,6-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2,6-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2-Chloronaphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2-Chlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2-Methylnaphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
2-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2-Nitrophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
2-Picoline	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
3,3'-Dichlorobenzidine	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:28 PM
3-Methylcholanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
3-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
4,6-Dinitro-2-methylphenol	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:28 PM
4-Aminobiphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
4-Bromophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
4-Chloro-3-methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
4-Chloroaniline	<0.000600	0.000600	0.00200	J	mg/L	1	09/07/11 06:28 PM
4-Chlorophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
4-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
4-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
4-Nitrophenol	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:28 PM
7,12-Dimethylbenz(a)anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
Acenaphthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Acenaphthylene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Acetophenone	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Aniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Benzidine	<0.00200	0.00200	0.00600	J	mg/L	1	09/07/11 06:28 PM
Benzo[a]anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Benzo[a]pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Benzo[b]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Benzo[g,h,i]perylene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Benzo[k]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Benzoic acid 0.006	~~0.00576~~	0.00200	0.00600	J UB	mg/L	1	09/07/11 06:28 PM
Benzyl alcohol	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:28 PM
Biphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Bis(2-chloroethoxy)methane	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM

Qualifiers:

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B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-159-0811
Lab ID: 1108232-03
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Bis(2-chloroisopropyl)ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Bis(2-ethylhexyl)phthalate	<0.00100	0.00100	0.00300		mg/L	1	09/07/11 06:28 PM
Butyl benzyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:28 PM
Carbazole	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Chrysene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Di-n-butyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:28 PM
Di-n-octyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:28 PM
Dibenz(a,j)acridine	<0.00100	0.00100	0.00400	N	mg/L	1	09/09/11 01:33 PM
Dibenz[a,h]anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Dibenzofuran	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Diethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:28 PM
Dimethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:28 PM
Dimethylphenethylamine	<0.00200	0.00200	0.00600	J	mg/L	1	09/09/11 01:33 PM
Diphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
Ethyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
Fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Fluorene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Hexachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Hexachlorobutadiene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Hexachlorocyclopentadiene	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:28 PM
Hexachloroethane	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Indeno[1,2,3-cd]pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Isophorone	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Methyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
N-Nitrosodi-n-propylamine	<0.000100	0.000100	0.000800		mg/L	1	09/07/11 06:28 PM
N-Nitrosodimethylamine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
N-Nitrosodiphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
N-Nitrosopiperidine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
Naphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Nitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
p-Dimethylaminoazobenzene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 01:33 PM
Pentachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Pentachloronitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
Pentachlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Phenacetin	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
Phenanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Phenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Pronamide	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:33 PM
Pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:28 PM
Pyridine	<0.000800	0.000800	0.00200		mg/L	1	09/07/11 06:28 PM
Surr: 2,4,6-Tribromophenol	144	0	42 - 124	S	%REC	1	09/09/11 01:33 PM
Surr: 2,4,6-Tribromophenol	106	0	42 - 124		%REC	1	09/07/11 06:28 PM
Surr: 2-Fluorobiphenyl	95.8	0	50 - 110		%REC	1	09/09/11 01:33 PM
Surr: 2-Fluorobiphenyl	91.5	0	50 - 110		%REC	1	09/07/11 06:28 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-159-0811
Lab ID: 1108232-03
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	67.8	0	20 - 110		%REC	1	09/07/11 06:28 PM
Surr: 2-Fluorophenol	97.0	0	20 - 110		%REC	1	09/09/11 01:33 PM
Surr: 4-Terphenyl-d14	110	0	51 - 135		%REC	1	09/09/11 01:33 PM
Surr: 4-Terphenyl-d14	98.8	0	51 - 135		%REC	1	09/07/11 06:28 PM
Surr: Nitrobenzene-d5	140	0	41 - 110	S	%REC	1	09/09/11 01:33 PM
Surr: Nitrobenzene-d5	101	0	41 - 110		%REC	1	09/07/11 06:28 PM
Surr: Phenol-d6	63.0	0	20 - 115		%REC	1	09/09/11 01:33 PM
Surr: Phenol-d6	43.0	0	20 - 115		%REC	1	09/07/11 06:28 PM
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:32 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:32 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:32 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 10:32 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:32 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 10:32 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:32 PM
2-Chloroethylvinylether	~~<0.00500~~	~~0.00500~~	~~0.0150~~	R	mg/L	1	08/24/11 10:32 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:32 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:32 PM
Acetone	0.015 ~~0.00837~~	0.00500	0.0150	J UB	mg/L	1	08/24/11 10:32 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 10:32 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-159-0811
Lab ID: 1108232-03
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:32 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
Chloromethane	0.00107	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 10:32 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:32 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:32 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 10:32 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:32 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:32 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:32 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:32 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:32 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:32 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 10:32 PM
Surr: 1,2-Dichloroethane-d4	105	0	70 - 120		%REC	1	08/24/11 10:32 PM
Surr: 4-Bromofluorobenzene	103	0	75 - 120		%REC	1	08/24/11 10:32 PM
Surr: Dibromofluoromethane	106	0	85 - 115		%REC	1	08/24/11 10:32 PM
Surr: Toluene-d8	99.0	0	85 - 120		%REC	1	08/24/11 10:32 PM
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	1130	30.0	100		mg/L	100	08/24/11 12:31 PM
Sulfate	7730	100	300		mg/L	100	08/24/11 12:31 PM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	180	10.0	20.0		mg/L	1	08/25/11 11:10 AM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 11:10 AM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 11:10 AM
Alkalinity, Total (As CaCO3)	180	10.0	20.0		mg/L	1	08/25/11 11:10 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-HMW-159-0811
Lab ID: 1108232-03
Collection Date: 08/23/11 12:01 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
pH		**M4500-H+ B**					**Analyst: JBC**
pH	7.65	0	0		pH Units	1	08/24/11 11:17 AM
Total Organic Carbon		**M5310C**					**Analyst: TGK**
Total Organic Carbon	1.08	0.300	1.00	UB	mg/L	1	08/25/11 01:07 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-RB-001-0811
Lab ID: 1108232-04
Collection Date: 08/23/11 11:45 AM
Matrix: Equip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		**M8015D**					**Analyst: DO**
TPH-DRO C10-C28	<0.0500	0.0500	0.100		mg/L	1	08/30/11 09:37 AM
Surr: Isopropylbenzene	59.9	0	47 - 142		%REC	1	08/30/11 09:37 AM
Surr: Octacosane	122	0	51 - 124		%REC	1	08/30/11 09:37 AM
Method 8015 Gasoline (GRO)		**M8015V**					**Analyst: DEW**
Gasoline Range Organics	<0.0600	0.0600	0.100		mg/L	1	08/24/11 08:07 PM
Surr: Tetrachlorethene	93.0	0	74 - 138		%REC	1	08/24/11 08:07 PM
Mercury Filtered (0.45µ)		**SW7470A**					**Analyst: LM**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/11 12:43 PM
Total Mercury: Aqueous		**SW7470A**					**Analyst: LM**
Mercury	<0.0000600	0.0000600	0.000200		mg/L	1	08/31/11 12:41 PM
Dissolved Metals-ICPMS (0.45µ)		**SW6020**					**Analyst: AJR**
Arsenic	<0.00200	0.00200	0.00600		mg/L	1	08/31/11 12:54 PM
Barium	<0.00300	0.00300	0.0100		mg/L	1	08/31/11 12:54 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/31/11 12:54 PM
Calcium	0.208	0.100	0.300	J	mg/L	1	08/31/11 12:54 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/31/11 12:54 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/31/11 12:54 PM
Magnesium	<0.100	0.100	0.300		mg/L	1	08/31/11 12:54 PM
Potassium	<0.100	0.100	0.300		mg/L	1	08/31/11 12:54 PM
Selenium	<0.00200	0.00200	0.00600		mg/L	1	08/31/11 12:54 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/31/11 12:54 PM
Sodium	0.108	0.100	0.300	J	mg/L	1	08/31/11 12:54 PM
Trace Metals: ICP-MS - Water		**SW6020**					**Analyst: AJR**
Arsenic	<0.00200	0.00200	0.00600		mg/L	1	08/30/11 05:50 PM
Barium	<0.00300	0.00300	0.0100		mg/L	1	08/30/11 05:50 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:50 PM
Calcium	0.139	0.100	0.300	J	mg/L	1	08/31/11 12:59 PM
Chromium	<0.00200	0.00200	0.00600		mg/L	1	08/30/11 05:50 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/11 05:50 PM
Magnesium	<0.100	0.100	0.300		mg/L	1	08/31/11 12:59 PM
Potassium	<0.100	0.100	0.300		mg/L	1	08/30/11 05:50 PM
Selenium	<0.00200	0.00200	0.00600		mg/L	1	08/30/11 05:50 PM
Silver	<0.000600	0.000600	0.00200		mg/L	1	08/30/11 05:50 PM
Sodium	<0.100	0.100	0.300		mg/L	1	08/31/11 12:59 PM
Semivolatiles by GC/MS - Water		**SW8270C**					**Analyst: DO**
1,2,4,5-Tetrachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
1,2,4-Trichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
1,2-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
1,2-Diphenylhydrazine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
1,3-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
1,4-Dichlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
1-Chloronaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 01:08 PM
1-Methylnaphthalene	<0.000200	0.000200	0.000800	N	mg/L	1	09/07/11 06:59 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-RB-001-0811
Lab ID: 1108232-04
Collection Date: 08/23/11 11:45 AM
Matrix: Equip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
1-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
2,4,5-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2,4,6-Trichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2,4-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2,4-Dimethylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2,4-Dinitrophenol	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:59 PM
2,4-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2,6-Dichlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2,6-Dinitrotoluene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2-Chloronaphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2-Chlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2-Methylnaphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2-Naphthylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
2-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2-Nitrophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
2-Picoline	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
3,3'-Dichlorobenzidine	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:59 PM
3-Methylcholanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
3-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
4,6-Dinitro-2-methylphenol	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:59 PM
4-Aminobiphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
4-Bromophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
4-Chloro-3-methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
4-Chloroaniline	<0.000600	0.000600	0.00200	J	mg/L	1	09/07/11 06:59 PM
4-Chlorophenyl phenyl ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
4-Methylphenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
4-Nitroaniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
4-Nitrophenol	<0.00100	0.00100	0.00400		mg/L	1	09/07/11 06:59 PM
7,12-Dimethylbenz(a)anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
Acenaphthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Acenaphthylene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Acetophenone	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Aniline	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Benzidine	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:59 PM
Benzo[a]anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Benzo[a]pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Benzo[b]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Benzo[g,h,i]perylene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Benzo[k]fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Benzoic acid	0.00512	0.00200	0.00600	J	mg/L	1	09/07/11 06:59 PM
Benzyl alcohol	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:59 PM
Biphenyl	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Bis(2-chloroethoxy)methane	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-RB-001-0811
Lab ID: 1108232-04
Collection Date: 08/23/11 11:45 AM
Matrix: Equip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Bis(2-chloroisopropyl)ether	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Bis(2-ethylhexyl)phthalate	<0.00100	0.00100	0.00300		mg/L	1	09/07/11 06:59 PM
Butyl benzyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:59 PM
Carbazole	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Chrysene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Di-n-butyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:59 PM
Di-n-octyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:59 PM
Dibenz(a,j)acridine	<0.00100	0.00100	0.00400	N	mg/L	1	09/09/11 01:08 PM
Dibenz[a,h]anthracene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Dibenzofuran	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Diethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:59 PM
Dimethyl phthalate	<0.00200	0.00200	0.00600		mg/L	1	09/07/11 06:59 PM
Dimethylphenethylamine	<0.00200	0.00200	0.00600		mg/L	1	09/09/11 01:08 PM
Diphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
Ethyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
Fluoranthene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Fluorene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Hexachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Hexachlorobutadiene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Hexachlorocyclopentadiene	<0.000600	0.000600	0.00200		mg/L	1	09/07/11 06:59 PM
Hexachloroethane	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Indeno[1,2,3-cd]pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Isophorone	0.00848	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Methyl methanesulfonate	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
N-Nitrosodi-n-propylamine	<0.000100	0.000100	0.000800		mg/L	1	09/07/11 06:59 PM
N-Nitrosodimethylamine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
N-Nitrosodiphenylamine	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
N-Nitrosopiperidine	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
Naphthalene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Nitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
p-Dimethylaminoazobenzene	<0.000200	0.000200	0.000800	N	mg/L	1	09/09/11 01:08 PM
Pentachlorobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Pentachloronitrobenzene	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
Pentachlorophenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Phenacetin	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
Phenanthrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Phenol	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Pronamide	<0.000200	0.000200	0.000800		mg/L	1	09/09/11 01:08 PM
Pyrene	<0.000200	0.000200	0.000800		mg/L	1	09/07/11 06:59 PM
Pyridine	<0.000800	0.000800	0.00200		mg/L	1	09/07/11 06:59 PM
Surr: 2,4,6-Tribromophenol	128	0	42 - 124	S	%REC	1	09/09/11 01:08 PM
Surr: 2,4,6-Tribromophenol	114	0	42 - 124		%REC	1	09/07/11 06:59 PM
Surr: 2-Fluorobiphenyl	85.0	0	50 - 110		%REC	1	09/09/11 01:08 PM
Surr: 2-Fluorobiphenyl	101	0	50 - 110		%REC	1	09/07/11 06:59 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-RB-001-0811
Lab ID: 1108232-04
Collection Date: 08/23/11 11:45 AM
Matrix: Equip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	71.0	0	20 - 110		%REC	1	09/07/11 06:59 PM
Surr: 2-Fluorophenol	88.0	0	20 - 110		%REC	1	09/09/11 01:08 PM
Surr: 4-Terphenyl-d14	96.8	0	51 - 135		%REC	1	09/09/11 01:08 PM
Surr: 4-Terphenyl-d14	117	0	51 - 135		%REC	1	09/07/11 06:59 PM
Surr: Nitrobenzene-d5	124	0	41 - 110	S	%REC	1	09/09/11 01:08 PM
Surr: Nitrobenzene-d5	110	0	41 - 110	S	%REC	1	09/07/11 06:59 PM
Surr: Phenol-d6	55.8	0	20 - 115		%REC	1	09/09/11 01:08 PM
Surr: Phenol-d6	46.8	0	20 - 115		%REC	1	09/07/11 06:59 PM
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:57 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:57 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:57 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 10:57 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 10:57 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 10:57 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:57 PM
2-Chloroethylvinylether	~~<0.00500~~	~~0.00500~~	~~0.0150~~	R	mg/L	1	08/24/11 10:57 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:57 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:57 PM
Acetone	0.00935	0.00500	0.0150	J	mg/L	1	08/24/11 10:57 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 10:57 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-RB-001-0811
Lab ID: 1108232-04
Collection Date: 08/23/11 11:45 AM
Matrix: Equip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:57 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
Chloromethane	0.000990	0.000300	0.00100	J	mg/L	1	08/24/11 10:57 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 10:57 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:57 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:57 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 10:57 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 10:57 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 10:57 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:57 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:57 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 10:57 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 10:57 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 10:57 PM
Surr: 1,2-Dichloroethane-d4	106	0	70 - 120		%REC	1	08/24/11 10:57 PM
Surr: 4-Bromofluorobenzene	103	0	75 - 120		%REC	1	08/24/11 10:57 PM
Surr: Dibromofluoromethane	106	0	85 - 115		%REC	1	08/24/11 10:57 PM
Surr: Toluene-d8	98.9	0	85 - 120		%REC	1	08/24/11 10:57 PM
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	0.715	0.300	1.00	J	mg/L	1	08/24/11 11:57 AM
Sulfate	1.83	1.00	3.00	J	mg/L	1	08/24/11 11:57 AM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 11:11 AM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 11:11 AM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 11:11 AM
Alkalinity, Total (As CaCO3)	<10.0	10.0	20.0		mg/L	1	08/25/11 11:11 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-RB-001-0811
Lab ID: 1108232-04
Collection Date: 08/23/11 11:45 AM
Matrix: Equip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
pH		**M4500-H+ B**					**Analyst: JBC**
pH	8.38	0	0		pH Units	1	08/24/11 11:19 AM
Total Organic Carbon		**M5310C**					**Analyst: TGK**
Total Organic Carbon	0.318	0.300	1.00	J	mg/L	1	08/25/11 01:26 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL Analytical

Date: 09/13/11

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-TB-0811
Lab ID: 1108232-05
Collection Date: 08/23/11 12:01 PM
Matrix: Trip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 Water Volatiles by GC/MS		**SW8260C**					**Analyst: KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 11:20 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 11:20 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 11:20 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	08/24/11 11:20 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	08/24/11 11:20 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	08/24/11 11:20 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 11:20 PM
2-Chloroethylvinylether	~~<0.00500~~	~~0.00500~~	~~0.0150~~	R	mg/L	1	08/24/11 11:20 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 11:20 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 11:20 PM
Acetone	0.00709	0.00500	0.0150	J	mg/L	1	08/24/11 11:20 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 11:20 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 11:20 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: HELSTF Construction Landfill
Project No:
Lab Order: 1108232

Client Sample ID: HLSF-3839-TB-0811
Lab ID: 1108232-05
Collection Date: 08/23/11 12:01 PM
Matrix: Trip Blank

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
Hexachlorobutadiene	<0.00100	0.00100	0.00300		mg/L	1	08/24/11 11:20 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 11:20 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 11:20 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	08/24/11 11:20 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
Naphthalene	<0.00500	0.00500	0.0150		mg/L	1	08/24/11 11:20 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	08/24/11 11:20 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 11:20 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 11:20 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	08/24/11 11:20 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	08/24/11 11:20 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	08/24/11 11:20 PM
Surr: 1,2-Dichloroethane-d4	104	0	70 - 120		%REC	1	08/24/11 11:20 PM
Surr: 4-Bromofluorobenzene	104	0	75 - 120		%REC	1	08/24/11 11:20 PM
Surr: Dibromofluoromethane	104	0	85 - 115		%REC	1	08/24/11 11:20 PM
Surr: Toluene-d8	99.0	0	85 - 120		%REC	1	08/24/11 11:20 PM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

DHL ANALYTICAL

2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 51627

CHAIN-OF-CUSTODY

CLIENT: ETA ENGINEERING
ADDRESS: 755 S. TELSHOR BLVD SUITE Q201 88011
PHONE: (575) 532-1526 FAX/E-MAIL:
DATA REPORTED TO:
ADDITIONAL REPORT COPIES TO:

DATE: PAGE 1 OF 1
PO #: DHL WORK ORDER #: 1108232
PROJECT LOCATION OR NAME:
CLENT PROJECT #: COLLECTOR:

Authorize 5% surcharge for TRRP Report? ☐ Yes ☐ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX ☐ MTBE ☐ (METHOD 8021)	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO (METHOD 8015) ☒ DRO (METHOD 8105) ☒	VOC 8260 ☒ VOC 624 ☐ VOC 8260/5035 ☐	SVOC 8270 ☒ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐	8081 PEST ☐ 608 PEST/PCB ☐ 8270 PEST ☐	8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐	8321 HERB ☐ 8330 EXPL ☐ PERCHLORATE ☐	METALS 6020 ☒ METALS 200.8 ☐ DISS. METALS ☒	RCRA ☐ TX11 ☐	PH ☒ HEX CHROM ☐ ALKALINITY ☒	CHLORIDE ☐ ANIONS ☐	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	TOC	FIELD NOTES
HLSF-3839-HAW-008-0811	01	8-23-11	1052	W		1																X									
HLSF-3839-HAW-057-0811	02	8-23-11	1201	W		16								X	X	X				X	X	X	X						X		
HLSF-3839-HAW-159-0811	03	8-23-11	1201	W		16								X	X	X				X	X	X	X						X		
HLSF-3839-RB-001-0811	04	8-23-11	1145	W		16								X	X	X				X	X	X	X						X		
HLSF-3839-TB-0811	05	8-23-11	1201	W		2									X																
TOTAL																															

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	8-23-11 1430	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	8/24/11	1000
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 25 THERM #: 57
CUSTODY SEALS: ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL #:
☐ APC DELIVERY
☐ HAND DELIVERED

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS