



September 27, 2011

Brad Davis
Zia Engineering & Environmental
755 S Telshor Blvd Ste F-201
Las Cruces, NM 88011

Order No: 1109094

TEL: (575) 678-3397
FAX: (575) 532-1587

RE: LC-38

Dear Brad Davis:

DHL Analytical received 3 sample(s) on 9/15/2011 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of DoD QSM Ver 4.2 and NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. This report shall not be reproduced except in full without the written approval of DHL Analytical, Inc. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in black ink that reads "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas & DoD Laboratory Certification Number: T104704211-11-7 & DoD ELAP #ADE-1416 v2



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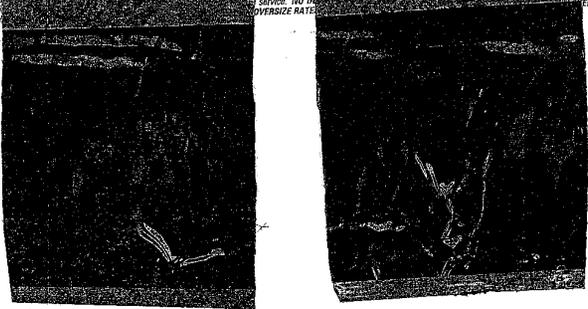


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1. To: Print Name (Person) <u>JENNIFER BARNER (512) 338-8222</u> Phone (Important) Company Name <u>DHL ANALYTICAL</u> Street Address (No P.O. Box or P.O. Box Zip Code) (Deliveries) <u>2300 DOUBLE CREEK DR</u> Suite / Floor _____ City <u>ROUND ROCK TX</u> State <u>TX</u> Zip <u>78664</u>		2. From: Print Name (Person) <u>SARAI SAHIA</u> Phone (Important) <u>578-532-1526</u> Company Name <u>ZIA ENGINEERING</u> Street Address <u>755 S. TESLOR BLVD.</u> Suite / Floor _____ City <u>LAS CRUCES</u> State <u>NM</u> Zip <u>88011</u>	
3. Service: Visit www.lso.com for availability of services to your destination and enjoy added features by creating your shipping label online. <input checked="" type="checkbox"/> By 10:30 am Delivery Check availability at www.lso.com <input type="checkbox"/> Saturday Delivery (Extra charge, not available on Ground) Check availability at www.lso.com <input type="checkbox"/> By 8:30 am Delivery (Extra charge, no signature obtained) Check availability at www.lso.com <input type="checkbox"/> Other _____ <input type="checkbox"/> By 3:00 pm Delivery Assumed 10:30 a.m. service unless otherwise noted. <input type="checkbox"/> Ground (next day to most cities) <input checked="" type="checkbox"/> Deliver Without Delivery Signature (See Limits of Liability below)		4. Package: Weight: <u>50</u> Your Company's Billing Reference Information <u>LCS-09-015-BG029</u> Ship Date: (mm/dd/yy) <u>9/14/11</u>	
Release Signature <u>X 12 x 12 x 12</u>		FOR COURIER USE ONLY Courier Number <u>3442</u> <input type="checkbox"/> Check here if LSO Shipping Labels are used with Ground Service. Pick-up Location <u>6017</u> Date: <u>09-14</u> Time: <u>1805</u> City Code: _____	

LIMIT OF LIABILITY: We are not responsible for loss or damage to contents of \$100 for any reason unless you: 1) declare a greater value (not to exceed \$25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the declared value. Additional charges and limitations of liability are contained in our current Service Guide. If you ask us to deliver to a residential address, RESIDENTIAL DELIVERIES FEES MAY APPLY.



Sample Receipt Checklist

Client Name Zia Engineering & Environmental
Work Order Number 1109094

Date Received: 9/15/2011
Received by JB

Checklist completed by: JB 9/15/11 Reviewed by: SS 9-15-11
Signature Date Initials Date

Carrier name: LoneStar

- Shipping container/cooler in good condition? Yes No Not Present
 - Custody seals intact on shipping container/cooler? Yes No Not Present
 - Custody seals intact on sample bottles? Yes No Not Present
 - Chain of custody present? Yes No
 - Chain of custody signed when relinquished and received? Yes No
 - Chain of custody agrees with sample labels? Yes No
 - Samples in proper container/bottle? Yes No
 - Sample containers intact? Yes No
 - Sufficient sample volume for indicated test? Yes No
 - All samples received within holding time? Yes No
 - Container/Temp Blank temperature in compliance? Yes No 3.1 °C
 - Water - VOA vials have zero headspace? Yes No No VOA vials submitted
 - Water - pH acceptable upon receipt? Yes No Not Applicable
- Adjusted? no Checked by B

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Laboratory Data Package Signature Page

This data package consists of:

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

- R1 Field chain-of-custody documentation;
 - R2 Sample identification cross-reference;
 - R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
 - R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
 - R5 Test reports/summary forms for blank samples;
 - R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
 - R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
 - R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
 - R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
 - R10 Other problems or anomalies.
- The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

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

Scott Schroeder – Project Manager
John DuPont – General / QA Manager

Signature

Date

RG-366/TRRP-13 December 2002

DHL Analytical, Inc.							
Laboratory Review Checklist: Reportable Data							
Project Name: LC-38			Date: 9/27/2011				
Reviewer Name: Angie O'Donnell			Laboratory Work Order: 1109094				
Prep Batch Number(s): See Prep Dates Report			Run Batch: See Analytical Dates Report				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
		Chain-of-Custody (C-O-C)					
R1	OI	1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				R1-01
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and Quality Control (QC) Identification					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test Reports					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	Surrogate Recovery Data					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test Reports/Summary Forms for Blank Samples					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	Laboratory Control Samples (LCS):					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		R7-03
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical Duplicate Data					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method Quantitation Limits (MQLs):					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	Other Problems/Anomalies					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

- 1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
- 2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
- 3 NA = Not applicable.
- 4 NR = Not Reviewed.
- 5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: LC-38		Date: 9/27/2011					
Reviewer Name: Angie O'Donnell		Laboratory Work Order: 1109094					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial Calibration (ICAL)					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and Continuing Calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass Spectral Tuning:					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal Standards (IS):					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw Data (NELAC section 1 appendix A glossary, and section 5.12)					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual Column Confirmation					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively Identified Compounds (TICs):					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) Results:					
		1) Were percent recoveries within method QC limits?	X				
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S9-01
S10	OI	Method Detection Limit (MDL) Studies					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency Test Reports:					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/Analyte Identification Procedures					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)					
		1) Was DOC conducted consistent with NELAC Chapter 5C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/Validation Documentation for Methods (NELAC Chap 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
 2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
 3 NA = Not applicable.
 4 NR = Not Reviewed.
 5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

CLIENT: Zia Engineering & Environmental
Project: LC-38
Lab Order: 1109094

CASE NARRATIVE

This case narrative describes abnormalities and deviations that may affect the results and summarizes all known issues that need to be highlighted for the data user to assess the results. This case narrative and the report contents are compliant with DoD QSM Ver 4.2 and NELAC.

Samples were analyzed using the methods outlined in the following references:

Method SW6020 - Metals Analysis
Method M3500-Cr D (18th Edition) - Hexavalent Chromium
Method M8015D - DRO Analysis

Exception Report R1-01

The sample was received on and log-in performed on 9/15/2011. A total of 3 samples were received and all were analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Metals Analysis, the recovery of Chromium for the Matrix Spike and Matrix Spike Duplicate (1109110-03 MS/MSD) was below the method control limits. These are flagged accordingly in the QC Summary report. The recovery of this analyte was within method control limits in the associated LCS. The reference sample selected for the matrix spike and matrix spike duplicate was not from this work order. No further corrective actions were taken.

Exception Report S9-01

For Metals Analysis, the recovery of Chromium for the Post Digestion Spike (1109110-03 PDS) was below the method control limits. This is flagged accordingly in the QC Summary report. The recovery of this analyte was within method control limits in the associated Serial Dilution. The reference sample selected for the matrix spike and matrix spike duplicate was not from this work order. No further corrective actions were taken.

A summary of project communication follows:

DHL Analytical received the Project RFQ from the client on 12/29/09. Completed RFQ returned to client via email on 1/07/2010. Purchase Order/Terms and Conditions received and signed and approved by both parties on 01/25/2010.

A bottle kit (#2698) was requested and sent via Lonestar on 7/27/2011 to be received by 7/29/2011.

This sample delivery group arrived at DHL Analytical 9/15/11. Sample summary sent via email from Log-in to client on 9/15/11.

All hardcopies for the sample kit request, bill of lading for sample kit sent and login summary are kept in project folder 1108430.

CLIENT: Zia Engineering & Environmental
Project: LC-38
Lab Order: 1109094

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recv'd
1109094-01	LC38-DSPL-MW-001-0911		09/14/11 01:02 PM	09/15/11
1109094-02	LC38-DSPL-MW-002-0911		09/14/11 02:30 PM	09/15/11
1109094-03	LC38-DSPL-MW-102-0911		09/14/11 02:30 PM	09/15/11

CLIENT: Zia Engineering & Environmental
 Project: LC-38
 Lab Order: 1109094

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1109094-01A	LC38-DSPL-MW-001-0911	09/14/11 01:02 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/19/11 09:03 AM	48340
1109094-01B	LC38-DSPL-MW-001-0911	09/14/11 01:02 PM	Aqueous	SW7196A	Hexachrom Prep Water	09/15/11 10:33 AM	48294
1109094-01C	LC38-DSPL-MW-001-0911	09/14/11 01:02 PM	Aqueous	SW3510C	Aq Prep Sep Funnel: DRO	09/19/11 09:09 AM	48345
1109094-02A	LC38-DSPL-MW-002-0911	09/14/11 02:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/19/11 09:03 AM	48340
1109094-02B	LC38-DSPL-MW-002-0911	09/14/11 02:30 PM	Aqueous	SW7196A	Hexachrom Prep Water	09/15/11 10:33 AM	48294
1109094-02C	LC38-DSPL-MW-002-0911	09/14/11 02:30 PM	Aqueous	SW3510C	Aq Prep Sep Funnel: DRO	09/19/11 09:09 AM	48345
1109094-03A	LC38-DSPL-MW-102-0911	09/14/11 02:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/19/11 09:03 AM	48340
1109094-03B	LC38-DSPL-MW-102-0911	09/14/11 02:30 PM	Aqueous	SW7196A	Hexachrom Prep Water	09/15/11 10:33 AM	48294
1109094-03C	LC38-DSPL-MW-102-0911	09/14/11 02:30 PM	Aqueous	SW3510C	Aq Prep Sep Funnel: DRO	09/19/11 09:09 AM	48345

CLIENT: Zia Engineering & Environmental
 Project: LC-38
 Lab Order: 1109094

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1109094-01A	LC38-DSPL-MW-001-0911Aqueous	Aqueous	SW6020	Trace Metals: ICP-MS - Water	48340	1	09/20/11 02:23 PM	ICP-MS3_110920B
1109094-01B	LC38-DSPL-MW-001-0911Aqueous	Aqueous	M3500-Cr D	Hexavalent Chromium-Water	48294	1	09/15/11 11:19 AM	UV/VIS_2_110915A
1109094-01C	LC38-DSPL-MW-001-0911Aqueous	Aqueous	M8015D	TPH Extractable by GC - Water	48345	1	09/21/11 01:36 PM	GC15_110921A
1109094-02A	LC38-DSPL-MW-002-0911Aqueous	Aqueous	SW6020	Trace Metals: ICP-MS - Water	48340	1	09/20/11 01:55 PM	ICP-MS3_110920B
1109094-02B	LC38-DSPL-MW-002-0911Aqueous	Aqueous	M3500-Cr D	Hexavalent Chromium-Water	48294	1	09/15/11 11:19 AM	UV/VIS_2_110915A
1109094-02C	LC38-DSPL-MW-002-0911Aqueous	Aqueous	M8015D	TPH Extractable by GC - Water	48345	1	09/21/11 01:45 PM	GC15_110921A
1109094-03A	LC38-DSPL-MW-102-0911Aqueous	Aqueous	SW6020	Trace Metals: ICP-MS - Water	48340	1	09/20/11 02:01 PM	ICP-MS3_110920B
1109094-03B	LC38-DSPL-MW-102-0911Aqueous	Aqueous	M3500-Cr D	Hexavalent Chromium-Water	48294	1	09/15/11 11:19 AM	UV/VIS_2_110915A
1109094-03C	LC38-DSPL-MW-102-0911Aqueous	Aqueous	M8015D	TPH Extractable by GC - Water	48345	1	09/21/11 01:54 PM	GC15_110921A

CLIENT: Zia Engineering & Environmental
Project: LC-38
Project No:
Lab Order: 1109094

Client Sample ID: LC38-DSPL-MW-001-0911
Lab ID: 1109094-01
Collection Date: 09/14/11 01:02 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		M8015D					Analyst: DEW
TPH-DRO C10-C28	0.0731	0.0500	0.100	J	mg/L	1	09/21/11 01:36 PM
Surr: Isopropylbenzene	70.5	0	47 - 142		%REC	1	09/21/11 01:36 PM
Surr: Octacosane	84.9	0	51 - 124		%REC	1	09/21/11 01:36 PM
Trace Metals: ICP-MS - Water		SW6020					Analyst: AJR
Chromium	0.0899	0.00200	0.00600		mg/L	1	09/20/11 02:23 PM
Hexavalent Chromium-Water		M3500-Cr D					Analyst: LM
Hexavalent Chromium	<0.00800	0.00800	0.0100		mg/L	1	09/15/11 11:19 AM

Qualifiers:

- * Value exceeds TCLP Maximum Concentration Level
- B Analyte detected in the associated Method Blank
- C Sample Result or QC discussed in the Case Narrative
- DF Dilution Factor
- E TPH pattern not Gas or Diesel Range Pattern

- J Analyte detected between MDL and RL
- MDL Method Detection Limit
- N Parameter not NELAC certified
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- S Spike Recovery outside control limits

CLIENT: Zia Engineering & Environmental
Project: LC-38
Project No:
Lab Order: 1109094

Client Sample ID: LC38-DSPL-MW-002-0911
Lab ID: 1109094-02
Collection Date: 09/14/11 02:30 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		M8015D		Analyst: DEW			
TPH-DRO C10-C28	0.0752	0.0500	0.100	J	mg/L	1	09/21/11 01:45 PM
Surr: Isopropylbenzene	53.2	0	47 - 142		%REC	1	09/21/11 01:45 PM
Surr: Octacosane	84.8	0	51 - 124		%REC	1	09/21/11 01:45 PM
Trace Metals: ICP-MS - Water		SW6020		Analyst: AJR			
Chromium	0.00436	0.00200	0.00600	J	mg/L	1	09/20/11 01:55 PM
Hexavalent Chromium-Water		M3500-Cr D		Analyst: LM			
Hexavalent Chromium	<0.00800	0.00800	0.0100		mg/L	1	09/15/11 11:19 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: LC-38
Project No:
Lab Order: 1109094

Client Sample ID: LC38-DSPL-MW-102-0911
Lab ID: 1109094-03
Collection Date: 09/14/11 02:30 PM
Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH Extractable by GC - Water		M8015D					Analyst: DEW
TPH-DRO C10-C28	0.0580	0.0500	0.100	J	mg/L	1	09/21/11 01:54 PM
Surr: Isopropylbenzene	53.7	0	47 - 142		%REC	1	09/21/11 01:54 PM
Surr: Octacosane	84.2	0	51 - 124		%REC	1	09/21/11 01:54 PM
Trace Metals: ICP-MS - Water		SW6020					Analyst: AJR
Chromium	0.00428	0.00200	0.00600	J	mg/L	1	09/20/11 02:01 PM
Hexavalent Chromium-Water		M3500-Cr D					Analyst: LM
Hexavalent Chromium	<0.00800	0.00800	0.0100		mg/L	1	09/15/11 11:19 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
Work Order: 1109094
Project: LC-38

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_110921A

Sample ID: LCS-48345	Batch ID: 48345	TestNo: M8015D	Units: mg/L							
SampType: LCS	Run ID: GC15_110921A	Analysis Date: 09/21/11 01:09 PM	Prep Date: 09/19/11							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	1.11	0.100	1.250	0	88.7	50	114			
Surr: Isopropylbenzene	0.0588		0.1000		58.8	47	142			
Surr: Octacosane	0.0820		0.1000		82.0	51	124			

Sample ID: MB-48345	Batch ID: 48345	TestNo: M8015D	Units: mg/L							
SampType: MBLK	Run ID: GC15_110921A	Analysis Date: 09/21/11 01:27 PM	Prep Date: 09/19/11							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	<0.0500	0.100								
Surr: Isopropylbenzene	0.0509		0.1000		50.9	47	142			
Surr: Octacosane	0.0788		0.1000		78.8	51	124			

Sample ID: 1109110-03CMS	Batch ID: 48345	TestNo: M8015D	Units: mg/L							
SampType: MS	Run ID: GC15_110921A	Analysis Date: 09/21/11 04:11 PM	Prep Date: 09/19/11							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	1.24	0.100	1.250	0.1243	89.1	50	114			
Surr: Isopropylbenzene	0.0544		0.1000		54.4	47	142			
Surr: Octacosane	0.0855		0.1000		85.5	51	124			

Sample ID: 1109110-03CMSD	Batch ID: 48345	TestNo: M8015D	Units: mg/L							
SampType: MSD	Run ID: GC15_110921A	Analysis Date: 09/21/11 04:20 PM	Prep Date: 09/19/11							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	1.28	0.100	1.250	0.1243	92.2	50	114	3.02	30	
Surr: Isopropylbenzene	0.0615		0.1000		61.5	47	142	0	0	
Surr: Octacosane	0.0887		0.1000		88.7	51	124	0	0	

Sample ID: 1109127-01DMS	Batch ID: 48345	TestNo: M8015D	Units: mg/L							
SampType: MS	Run ID: GC15_110921A	Analysis Date: 09/21/11 04:29 PM	Prep Date: 09/19/11							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	1.18	0.100	1.250	0	94.7	50	114			
Surr: Isopropylbenzene	0.0625		0.1000		62.5	47	142			
Surr: Octacosane	0.0918		0.1000		91.8	51	124			

Sample ID: 1109127-01DMSD	Batch ID: 48345	TestNo: M8015D	Units: mg/L							
SampType: MSD	Run ID: GC15_110921A	Analysis Date: 09/21/11 04:38 PM	Prep Date: 09/19/11							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	1.18	0.100	1.250	0	94.6	50	114	0.108	30	
Surr: Isopropylbenzene	0.0559		0.1000		55.9	47	142	0	0	
Surr: Octacosane	0.0918		0.1000		91.8	51	124	0	0	

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

CLIENT: Zia Engineering & Environmental
Work Order: 1109094
Project: LC-38

ANALYTICAL QC SUMMARY REPORT
RunID: GC15_110921A

Sample ID:	ICV-110921	Batch ID:	R57017	TestNo:	M8015D	Units:	mg/L			
SampType:	ICV	Run ID:	GC15_110921A	Analysis Date:	09/21/11 01:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	529	0.100	500.0	0	106	80	120			
Surr: Isopropylbenzene	23.1		25.00		92.3	80	120			
Surr: Octacosane	22.2		25.00		88.9	80	120			

Sample ID:	CCV1-110921	Batch ID:	R57017	TestNo:	M8015D	Units:	mg/L			
SampType:	CCV	Run ID:	GC15_110921A	Analysis Date:	09/21/11 03:06 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	256	0.100	250.0	0	102	80	120			
Surr: Isopropylbenzene	11.5		12.50		91.7	80	120			
Surr: Octacosane	11.3		12.50		90.7	80	120			

Sample ID:	CCV2-110921	Batch ID:	R57017	TestNo:	M8015D	Units:	mg/L			
SampType:	CCV	Run ID:	GC15_110921A	Analysis Date:	09/21/11 04:47 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
TPH-DRO C10-C28	268	0.100	250.0	0	107	80	120			
Surr: Isopropylbenzene	12.0		12.50		95.9	80	120			
Surr: Octacosane	11.7		12.50		93.3	80	120			

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

CLIENT: Zia Engineering & Environmental
Work Order: 1109094
Project: LC-38

ANALYTICAL QC SUMMARY REPORT
RunID: ICP-MS3_110920B

Sample ID:	MB-48340	Batch ID:	48340	TestNo:	SW6020	Units:	mg/L				
SampType:	MBLK	Run ID:	ICP-MS3_110920B	Analysis Date:	09/20/11 01:27 PM	Prep Date:	09/19/11				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual	
Chromium	<0.00200	0.00600									
Sample ID:	LCS-48340	Batch ID:	48340	TestNo:	SW6020	Units:	mg/L				
SampType:	LCS	Run ID:	ICP-MS3_110920B	Analysis Date:	09/20/11 01:32 PM	Prep Date:	09/19/11				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual	
Chromium	0.196	0.00600	0.200	0	97.8	80	120				
Sample ID:	LCSD-48340	Batch ID:	48340	TestNo:	SW6020	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS3_110920B	Analysis Date:	09/20/11 01:38 PM	Prep Date:	09/19/11				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual	
Chromium	0.182	0.00600	0.200	0	90.8	80	120	7.48	15		
Sample ID:	1109110-03A SD	Batch ID:	48340	TestNo:	SW6020	Units:	mg/L				
SampType:	SD	Run ID:	ICP-MS3_110920B	Analysis Date:	09/20/11 02:12 PM	Prep Date:	09/19/11				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual	
Chromium	2.14	0.0300	0	1.95				9.17	10		
Sample ID:	1109110-03A PDS	Batch ID:	48340	TestNo:	SW6020	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS3_110920B	Analysis Date:	09/20/11 02:40 PM	Prep Date:	09/19/11				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual	
Chromium	2.08	0.00600	0.200	1.95	64.5	75	125				S
Sample ID:	1109110-03A MS	Batch ID:	48340	TestNo:	SW6020	Units:	mg/L				
SampType:	MS	Run ID:	ICP-MS3_110920B	Analysis Date:	09/20/11 02:45 PM	Prep Date:	09/19/11				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual	
Chromium	1.96	0.00600	0.200	1.95	6.50	80	120				S
Sample ID:	1109110-03A MSD	Batch ID:	48340	TestNo:	SW6020	Units:	mg/L				
SampType:	MSD	Run ID:	ICP-MS3_110920B	Analysis Date:	09/20/11 02:51 PM	Prep Date:	09/19/11				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual	
Chromium	1.97	0.00600	0.200	1.95	9.50	80	120	0.305	15		S

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

CLIENT: Zia Engineering & Environmental
Work Order: 1109094
Project: LC-38

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_110920B

Sample ID: ICV-110920	Batch ID: R56998	TestNo: SW6020	Units: mg/L
SampType: ICV	Run ID: ICP-MS3_110920B	Analysis Date: 09/20/11 01:16 PM	Prep Date:
Analyte	Result	RL	SPK value
Chromium	0.0961	0.00600	0.100
			Ref Val
			0
			%REC
			96.1
			LowLimit
			90
			HighLimit
			110
			%RPD
			RPD Limit
			Qual

Sample ID: CCV1-110920	Batch ID: R56998	TestNo: SW6020	Units: mg/L
SampType: CCV	Run ID: ICP-MS3_110920B	Analysis Date: 09/20/11 02:56 PM	Prep Date:
Analyte	Result	RL	SPK value
Chromium	0.190	0.00600	0.200
			Ref Val
			0
			%REC
			94.8
			LowLimit
			90
			HighLimit
			110
			%RPD
			RPD Limit
			Qual

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

CLIENT: Zia Engineering & Environmental
 Work Order: 1109094
 Project: LC-38

ANALYTICAL QC SUMMARY REPORT

RunID: UV/VIS_2_110915A

Sample ID:	MB-48294	Batch ID:	48294	TestNo:	M3500-Cr D	Units:	mg/L			
SampType:	MBLK	Run ID:	UV/VIS_2_110915A	Analysis Date:	09/15/11 11:19 AM	Prep Date:	09/15/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Hexavalent Chromium	<0.00800	0.0100								
Sample ID:	LCS-48294	Batch ID:	48294	TestNo:	M3500-Cr D	Units:	mg/L			
SampType:	LCS	Run ID:	UV/VIS_2_110915A	Analysis Date:	09/15/11 11:19 AM	Prep Date:	09/15/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Hexavalent Chromium	0.0985	0.0100	0.100	0	98.5	85	115			
Sample ID:	LCSD-48294	Batch ID:	48294	TestNo:	M3500-Cr D	Units:	mg/L			
SampType:	LCSD	Run ID:	UV/VIS_2_110915A	Analysis Date:	09/15/11 11:19 AM	Prep Date:	09/15/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Hexavalent Chromium	0.101	0.0100	0.100	0	101	85	115	2.07	15	
Sample ID:	1109094-03B MS	Batch ID:	48294	TestNo:	M3500-Cr D	Units:	mg/L			
SampType:	MS	Run ID:	UV/VIS_2_110915A	Analysis Date:	09/15/11 11:19 AM	Prep Date:	09/15/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Hexavalent Chromium	0.102	0.0100	0.100	0	102	85	115			
Sample ID:	1109094-03B MSD	Batch ID:	48294	TestNo:	M3500-Cr D	Units:	mg/L			
SampType:	MSD	Run ID:	UV/VIS_2_110915A	Analysis Date:	09/15/11 11:19 AM	Prep Date:	09/15/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Hexavalent Chromium	0.105	0.0100	0.100	0	105	85	115	3.25	15	

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

CLIENT: Zia Engineering & Environmental
Work Order: 1109094
Project: LC-38

ANALYTICAL QC SUMMARY REPORT

RunID: UV/VIS_2_110915A

Sample ID: ICV-110915	Batch ID: R56911	TestNo:	M3500-Cr D	Units:	mg/L					
SampType: ICV	Run ID: UV/VIS_2_110915A	Analysis Date:	09/15/11 11:19 AM	Prep Date:						
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Hexavalent Chromium	0.100	0.0100	0.100	0	100	90	110			

Sample ID: CCV-110915	Batch ID: R56911	TestNo:	M3500-Cr D	Units:	mg/L					
SampType: CCV	Run ID: UV/VIS_2_110915A	Analysis Date:	09/15/11 11:19 AM	Prep Date:						
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Hexavalent Chromium	0.205	0.0100	0.200	0	103	90	110			

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

Lab Order: 1109094
Client: Zia Engineering & Environmental
Project: LC-38

Sequence Report**Run ID: GC15_110921A**

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date
ICV-110921	----	M8015D	R57017	1	09/21/11 01:00 PM	
LCS-48345	----	M8015D	48345	1	09/21/11 01:09 PM	09/19/11
MB-48345	----	M8015D	48345	1	09/21/11 01:27 PM	09/19/11
1109094-01C	LC38-DSPL-MW-001-0911	M8015D	48345	1	09/21/11 01:36 PM	09/19/11
1109094-02C	LC38-DSPL-MW-002-0911	M8015D	48345	1	09/21/11 01:45 PM	09/19/11
1109094-03C	LC38-DSPL-MW-102-0911	M8015D	48345	1	09/21/11 01:54 PM	09/19/11
CCV1-110921	----	M8015D	R57017	1	09/21/11 03:06 PM	
1109110-03CMS	----	M8015D	48345	1	09/21/11 04:11 PM	09/19/11
1109110-03CMSD	----	M8015D	48345	1	09/21/11 04:20 PM	09/19/11
1109127-01DMS	----	M8015D	48345	1	09/21/11 04:29 PM	09/19/11
1109127-01DMSD	----	M8015D	48345	1	09/21/11 04:38 PM	09/19/11
CCV2-110921	----	M8015D	R57017	1	09/21/11 04:47 PM	

Lab Order: 1109094
Client: Zia Engineering & Environmental
Project: LC-38

Sequence Report**Run ID: ICP-MS3_110920B**

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date
ICV-110920	----	SW6020	R56998	1	09/20/11 01:16 PM	
ICB1-110920	----	SW6020	R56998	1	09/20/11 01:21 PM	
MB-48340	----	SW6020	48340	1	09/20/11 01:27 PM	09/19/11
LCS-48340	----	SW6020	48340	1	09/20/11 01:32 PM	09/19/11
LCSD-48340	----	SW6020	48340	1	09/20/11 01:38 PM	09/19/11
1109094-02A	LC38-DSPL-MW-002-0911	SW6020	48340	1	09/20/11 01:55 PM	09/19/11
1109094-03A	LC38-DSPL-MW-102-0911	SW6020	48340	1	09/20/11 02:01 PM	09/19/11
1109110-03A SD	----	SW6020	48340	5	09/20/11 02:12 PM	09/19/11
1109094-01A	LC38-DSPL-MW-001-0911	SW6020	48340	1	09/20/11 02:23 PM	09/19/11
1109110-03A PDS	----	SW6020	48340	1	09/20/11 02:40 PM	09/19/11
1109110-03A MS	----	SW6020	48340	1	09/20/11 02:45 PM	09/19/11
1109110-03A MSD	----	SW6020	48340	1	09/20/11 02:51 PM	09/19/11
CCV1-110920	----	SW6020	R56998	1	09/20/11 02:56 PM	
CCB1-110920	----	SW6020	R56998	1	09/20/11 03:36 PM	

Lab Order: 1109094
Client: Zia Engineering & Environmental
Project: LC-38

Sequence Report**Run ID: UV/VIS_2_110915A**

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date
ICV-110915	----	M3500-Cr D	R56911	1	09/15/11 11:19 AM	
MB-48294	----	M3500-Cr D	48294	1	09/15/11 11:19 AM	09/15/11
LCS-48294	----	M3500-Cr D	48294	1	09/15/11 11:19 AM	09/15/11
LCSD-48294	----	M3500-Cr D	48294	1	09/15/11 11:19 AM	09/15/11
1109094-03B	LC38-DSPL-MW-102-0911	M3500-Cr D	48294	1	09/15/11 11:19 AM	09/15/11
1109094-03B MS	LC38-DSPL-MW-102-0911MSM	M3500-Cr D	48294	1	09/15/11 11:19 AM	09/15/11
1109094-03B MSD	LC38-DSPL-MW-102-0911MSDM	M3500-Cr D	48294	1	09/15/11 11:19 AM	09/15/11
1109094-01B	LC38-DSPL-MW-001-0911	M3500-Cr D	48294	1	09/15/11 11:19 AM	09/15/11
1109094-02B	LC38-DSPL-MW-002-0911	M3500-Cr D	48294	1	09/15/11 11:19 AM	09/15/11
CCV-110915	----	M3500-Cr D	R56911	1	09/15/11 11:19 AM	