March 25, 2013

Brad Davis
Zia Engineering & Environmental
755 S Telshor Blvd Ste F-201
Las Cruces, NM 88011
TEL: (575) 993-6824
FAX (575) 532-1587

Order No.: 1303112

RE: HELSTF Chromium Spill Groundwater

Dear Brad Davis:

DHL Analytical, Inc. received 3 sample(s) on 3/13/2013 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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-12-9

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zia engineering & environmental consultants, llc
755 S. Telshor Blvd. Ste. F-201
Las Cruces, NM 88011
575-532-1526 u
575-532-1587 f

#130312

CHAIN OF CUSTODY RECORD

PROJECT NO.

PROJECT NAME: Chromium HELSTF Diesel Spill groundwater

SAMPLER'S SIGNATURE: George Esqueda

DATE	TIME	SAMPLE ID	MATRIX	LAB NO.	NO. OF CONTAINERS	VOC	TOC	DRO	Hex chrom	Total chrom	PH					REMARKS
~~3/12/13~~	~~1305~~	~~DRW-16~~	WATER		~~10~~	✓	✓	✓	✓	✓	✓					Per Brad 3/13/13 Note: 24 Hr Hold Time on Hex Chrom.
3/12/13	1501	~~HMW-41~~ per Brad 3/13/13 HLSF-0143-HMW-041-0313	WATER		10	✓	✓	✓	✓	✓	✓					
3/12/13	1600	~~HMW-40~~ HLSF-0143-~~HMW~~ HMW-040-0313	WATER		10	✓	✓	✓	✓	✓	✓					
3/12/13	1600	Trip Blanks	WATER		2	✓										
		Tep. Blank	water													

PROJECT INFORMATION	SAMPLES RECEIVED		1. RELINQUISHED BY: (SIGNATURE)	2. RELINQUISHED BY: (SIGNATURE)	3. RECEIVED BY LAB: (SIGNATURE)
PROJECT MANAGER: Brad Davis	TOTAL NO. OF CONTAINERS	40	(PRINTED NAME) George Esqueda	(PRINTED NAME)	(PRINTED NAME)
SHIPPING ID NO.	CHAIN OF CUSTODY SEALS	✓	RECEIVED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	(COMPANY) DHL Analytical
	GOOD CONDITION/CHILLED	1.5	(TIME/DATE) 3/12/13	(TIME/DATE) 3/13/13 930	(TIME/DATE) 3/13/13 930
VIA: Fed-X	CONFORMS TO RECORD		SPECIAL INSTRUCTIONS / COMMENTS:		

PLEASE USE BALL POINT PEN

DISTRIBUTION: WHITE - PROJECT FILES; YELLOW - LAB; PINK - FIELD COPY

FedEx Express NEW Package US Airbill

FedEx Tracking Number 8017 7679 4108

From

Date 3/12/13 [redacted]

Sender's Name Brad Davis Phone 575 644-919

Company Zia Eng.

Address 755 S. Telshor Blvd. Suite F-201

Dept./Floor/Suite/Room

City Las Cruces State N.M. ZIP 88011

Your Internal Billing Reference

To

Recipient's Name John Dupont Phone 512 388-8222

Company DHL Analitical.

Address 2300 Dobel Krek Drv.

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Round Rock State TX ZIP 78664

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

1 D 8017 7679 4108

4108

ZIA ENG AND ENV CONSULTANTS INC

GOVT ACCT

755 S TELSHOR BLVD, STE F-201

LAS CRUCES, NM 88011

UNITED STATES US

CAD: 7POS1400

DIMS: 26x15x14 IN

BILL SENDER

TO JOHN DUPONT

DHL ANALYTICAL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222 REF:

INV: PO: DEPT:

FedEx Express

E

J1310121219012B

TRK# 0200 8017 7679 4108

WED - 13 MAR 10:30A

PRIORITY OVERNIGHT

XH BSMA

78664

TX-US AUS

CUSTODY SEAL

DATE 3/12/13

SIGNATURE [signature]

QEC Quality Environmental Containers

800-255-3950 • 304-255-3900

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Zia Engineering & Environmental** Date Received: **3/13/2013**

Work Order Number **1303112** Received by **JB**

Checklist completed by: [signature] 3/13/2013 (Signature / Date) Reviewed by [initials] 3/13/2013 (Initials / Date)

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 ☐	1.5 °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 S

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: HELSTF Chromium Spill Groundwater	**Date: 3/25/2013**
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 1303112**
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]
R1	OI	**Chain-of-Custody (C-O-C)**					
		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) Where 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			R7-04
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				R10-01
		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: HELSTF Chromium Spill Groundwater	**Date: 3/25/2013**
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 1303112**

#[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			**S4-01**
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				
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).

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.

John DuPont – General Manager

Scott Schroeder – Technical Director

Signature

03/25/13
Date

DHL Analytical, Inc. **Date:** *25-Mar-13*

CLIENT: Zia Engineering & Environmental
Project: HELSTF Chromium Spill Groundwater
Lab Order: 1303112

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 M8015D - DRO Analysis
Method SW8260C - Volatile Organics
Method M3500-CR D - Hexavalent Chromium - Water
Method M4500-H+ B - pH of a Water
Method M5310C - TOC Analysis

Exception Report R1-01

The samples were received on and log-in performed on 3/13/2013. A total of 2 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R7-03 and R7-04

For Volatiles Analysis, the recoveries of 2 compounds for the Matrix Spike and recoveries and/or RPDs of three compounds for the Matrix Spike Duplicate (1303141-01 MS/MSD) were outside of the method control limits. These are flagged accordingly in the QC Summary report. These compounds were 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.

For Metals Analysis, the recovery of Chromium for the Matrix Spike (1303141-01 MS) was marginally below the method control limits. This was flagged accordingly the QC Summary report. This analyte was within method control limits in the associated LCS. No further corrective action was taken.

Exception Report R10-01

The Hexavalent Chromium Analysis/Trace Metals Analysis, results for Sample HLSF-0143-HMW-041-0313 showed Hexavalent Chromium as slightly higher than the total Chromium. The results were within acceptable analytical variation limits.

Exception Report S4-01

For Metals Analysis, the response factor of Internal Standard Scandium 45-1 for the Matrix Spike, Matrix Spike Duplicate and the Post Digestion Spike (1303141-01 MS/MSD/PDS) and the ending QC (CCV1-130319, CCB-130319, LCVL1-130319) was above the method control limits as per QSM 4.2 and within Method 6020A specifications. The recovery of the associated analyte, Chromium, was within method control limits in the affected QC Samples. No further corrective action was 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.
Brad Davis of Zia requested a bottle kit via email from Jennifer Barker of DHL on 2/25/2013.
DHL Bottle kit #3911 sent on 2/27/2013 via Lonestar Overnight, to arrive by 3/1/2013.
This sample delivery group arrived at DHL Analytical 3/13/2013. Sample summary sent via email from Log-in to client on 3/13/2013.
All hardcopies for the sample kit request, bill of lading for sample kit sent and login summary are kept in project folder.

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT: Zia Engineering & Environmental
Project: HELSTF Chromium Spill Groundwater
Lab Order: 1303112

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1303112-01	HLSF-0143-HMW-041-0313		03/12/13 03:01 PM	3/13/2013
1303112-02	HLSF-0143-HMW-040-0313		03/12/13 04:00 PM	3/13/2013
1303112-03	Trip Blank		03/12/13 04:00 PM	3/13/2013

DHL Analytical, Inc.

25-Mar-13

Lab Order: 1303112
Client: Zia Engineering & Environmental
Project: HELSTF Chromium Spill Ground

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1303112-01A	HLSF-0143-HMW-041-0313	03/12/13 03:01 PM	Aqueous	SW5030C	Purge and Trap Water GC/MS	03/22/13 10:33 AM	56560
1303112-01B	HLSF-0143-HMW-041-0313	03/12/13 03:01 PM	Aqueous	M5310C	TOC prep Aqueous	03/18/13 09:20 AM	56471
1303112-01C	HLSF-0143-HMW-041-0313	03/12/13 03:01 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	03/18/13 08:43 AM	56469
	HLSF-0143-HMW-041-0313	03/12/13 03:01 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	03/18/13 08:43 AM	56469
1303112-01D	HLSF-0143-HMW-041-0313	03/12/13 03:01 PM	Aqueous	SW7196A	Hexachrom Prep Water	03/13/13 10:43 AM	56415
	HLSF-0143-HMW-041-0313	03/12/13 03:01 PM	Aqueous	M4500-H+ B	pH Preparation	03/13/13 09:00 AM	56411
1303112-01E	HLSF-0143-HMW-041-0313	03/12/13 03:01 PM	Aqueous	SW3510C	Aq Prep Sep Funnel: DRO	03/15/13 12:45 PM	56459
1303112-02A	HLSF-0143-HMW-040-0313	03/12/13 04:00 PM	Aqueous	SW5030C	Purge and Trap Water GC/MS	03/22/13 10:33 AM	56560
1303112-02B	HLSF-0143-HMW-040-0313	03/12/13 04:00 PM	Aqueous	M5310C	TOC prep Aqueous	03/18/13 09:20 AM	56471
1303112-02C	HLSF-0143-HMW-040-0313	03/12/13 04:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	03/18/13 08:43 AM	56469
	HLSF-0143-HMW-040-0313	03/12/13 04:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	03/18/13 08:43 AM	56469
1303112-02D	HLSF-0143-HMW-040-0313	03/12/13 04:00 PM	Aqueous	SW7196A	Hexachrom Prep Water	03/13/13 10:43 AM	56415
	HLSF-0143-HMW-040-0313	03/12/13 04:00 PM	Aqueous	M4500-H+ B	pH Preparation	03/13/13 09:00 AM	56411
1303112-02E	HLSF-0143-HMW-040-0313	03/12/13 04:00 PM	Aqueous	SW3510C	Aq Prep Sep Funnel: DRO	03/15/13 12:45 PM	56459
1303112-03A	Trip Blank	03/12/13 04:00 PM	Trip Blank	SW5030C	Purge and Trap Water GC/MS	03/22/13 10:33 AM	56560

Lab Order: 1303112
Client: Zia Engineering & Environmental
Project: HELSTF Chromium Spill Ground

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1303112-01A	HLSF-0143-HMW-041-0313	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	56560	1	03/22/13 02:02 PM	GCMS7_130322A
1303112-01B	HLSF-0143-HMW-041-0313	Aqueous	M5310C	Total Organic Carbon	56471	1	03/18/13 06:29 PM	TOC_130318A
1303112-01C	HLSF-0143-HMW-041-0313	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	56469	1	03/19/13 02:20 PM	ICP-MS3_130319A
	HLSF-0143-HMW-041-0313	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	56469	1	03/20/13 01:48 PM	ICP-MS2_130320B
1303112-01D	HLSF-0143-HMW-041-0313	Aqueous	M3500-Cr D	Hexavalent Chromium-Water	56415	1	03/13/13 10:28 AM	UV/VIS_2_130313A
	HLSF-0143-HMW-041-0313	Aqueous	M4500-H+ B	pH	56411	1	03/13/13 09:48 AM	TITRATOR_130313A
1303112-01E	HLSF-0143-HMW-041-0313	Aqueous	M8015D	TPH Extractable by GC - Water	56459	1	03/20/13 10:31 AM	GC15_130320A
1303112-02A	HLSF-0143-HMW-040-0313	Aqueous	SW8260C	8260 Water Volatiles by GC/MS	56560	1	03/22/13 02:26 PM	GCMS7_130322A
1303112-02B	HLSF-0143-HMW-040-0313	Aqueous	M5310C	Total Organic Carbon	56471	1	03/18/13 06:51 PM	TOC_130318A
1303112-02C	HLSF-0143-HMW-040-0313	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	56469	1	03/19/13 02:26 PM	ICP-MS3_130319A
	HLSF-0143-HMW-040-0313	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	56469	1	03/20/13 01:54 PM	ICP-MS2_130320B
1303112-02D	HLSF-0143-HMW-040-0313	Aqueous	M3500-Cr D	Hexavalent Chromium-Water	56415	1	03/13/13 10:28 AM	UV/VIS_2_130313A
	HLSF-0143-HMW-040-0313	Aqueous	M4500-H+ B	pH	56411	1	03/13/13 09:51 AM	TITRATOR_130313A
1303112-02E	HLSF-0143-HMW-040-0313	Aqueous	M8015D	TPH Extractable by GC - Water	56459	1	03/20/13 10:40 AM	GC15_130320A
1303112-03A	Trip Blank	Trip Blank	SW8260C	8260 Water Volatiles by GC/MS	56560	1	03/22/13 02:51 PM	GCMS7_130322A

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT:	Zia Engineering & Environmental	**Client Sample ID:**	HLSF-0143-HMW-041-0313
Project:	HELSTF Chromium Spill Groundwater	**Lab ID:**	1303112-01
Project No:		**Collection Date:**	03/12/13 03:01 PM
Lab Order:	1303112	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **AJR**
TPH-DRO C10-C28	<0.0800	0.0800	0.100		mg/L	1	03/20/13 10:31 AM
Surr: Isopropylbenzene	58.0	0	47-142		%REC	1	03/20/13 10:31 AM
Surr: Octacosane	110	0	51-124		%REC	1	03/20/13 10:31 AM
TRACE METALS: ICP-MS - WATER		**SW6020A**					Analyst: **SW**
Chromium	0.408	0.00200	0.00600		mg/L	1	03/20/13 01:48 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,1-Dichloroethane	0.000410	0.000200	0.00100	J	mg/L	1	03/22/13 02:02 PM
1,1-Dichloroethene	0.00227	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:02 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:02 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:02 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	03/22/13 02:02 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:02 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	03/22/13 02:02 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:02 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:02 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:02 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:02 PM
Acetone	0.00765	0.00500	0.0150	J	mg/L	1	03/22/13 02:02 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	03/22/13 02:02 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM

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	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT:	Zia Engineering & Environmental	**Client Sample ID:**	HLSF-0143-HMW-041-0313
Project:	HELSTF Chromium Spill Groundwater	**Lab ID:**	1303112-01
Project No:		**Collection Date:**	03/12/13 03:01 PM
Lab Order:	1303112	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **KL**
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:02 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
Chloroform	0.000710	0.000300	0.00100	J	mg/L	1	03/22/13 02:02 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:02 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:02 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	03/22/13 02:02 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:02 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:02 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:02 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Trichloroethene	0.0715	0.000600	0.00200		mg/L	1	03/22/13 02:02 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:02 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	03/22/13 02:02 PM
Surr: 1,2-Dichloroethane-d4	114	0	70-120		%REC	1	03/22/13 02:02 PM
Surr: 4-Bromofluorobenzene	109	0	75-120		%REC	1	03/22/13 02:02 PM

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	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT:	Zia Engineering & Environmental	**Client Sample ID:**	HLSF-0143-HMW-041-0313
Project:	HELSTF Chromium Spill Groundwater	**Lab ID:**	1303112-01
Project No:		**Collection Date:**	03/12/13 03:01 PM
Lab Order:	1303112	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **KL**
Surr: Dibromofluoromethane	114	0	85-115		%REC	1	03/22/13 02:02 PM
Surr: Toluene-d8	107	0	85-120		%REC	1	03/22/13 02:02 PM
HEXAVALENT CHROMIUM-WATER		**M3500-CR D**					Analyst: **LM**
Hexavalent Chromium	0.455	0.00800	0.0100		mg/L	1	03/13/13 10:28 AM
PH		**M4500-H+ B**					Analyst: **JCG**
pH	7.59	0	0		pH units	1	03/13/13 09:48 AM
TOTAL ORGANIC CARBON		**M5310C**					Analyst: **JCG**
Total Organic Carbon	0.560	0.300	1.00	J	mg/L	1	03/18/13 06:29 PM

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	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT:	Zia Engineering & Environmental	**Client Sample ID:**	HLSF-0143-HMW-040-0313
Project:	HELSTF Chromium Spill Groundwater	**Lab ID:**	1303112-02
Project No:		**Collection Date:**	03/12/13 04:00 PM
Lab Order:	1303112	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - WATER		**M8015D**					Analyst: **AJR**
TPH-DRO C10-C28	<0.0800	0.0800	0.100		mg/L	1	03/20/13 10:40 AM
Surr: Isopropylbenzene	57.8	0	47-142		%REC	1	03/20/13 10:40 AM
Surr: Octacosane	112	0	51-124		%REC	1	03/20/13 10:40 AM
TRACE METALS: ICP-MS - WATER		**SW6020A**					Analyst: **SW**
Chromium	0.00411	0.00200	0.00600	J	mg/L	1	03/20/13 01:54 PM
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **KL**
1,1,1,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:26 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:26 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:26 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	03/22/13 02:26 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:26 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	03/22/13 02:26 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:26 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:26 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:26 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:26 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:26 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	03/22/13 02:26 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM

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	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT:	Zia Engineering & Environmental	**Client Sample ID:**	HLSF-0143-HMW-040-0313
Project:	HELSTF Chromium Spill Groundwater	**Lab ID:**	1303112-02
Project No:		**Collection Date:**	03/12/13 04:00 PM
Lab Order:	1303112	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **KL**
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:26 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:26 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:26 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	03/22/13 02:26 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:26 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:26 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:26 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:26 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:26 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	03/22/13 02:26 PM
Surr: 1,2-Dichloroethane-d4	115	0	70-120		%REC	1	03/22/13 02:26 PM
Surr: 4-Bromofluorobenzene	110	0	75-120		%REC	1	03/22/13 02:26 PM

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	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT:	Zia Engineering & Environmental	**Client Sample ID:**	HLSF-0143-HMW-040-0313
Project:	HELSTF Chromium Spill Groundwater	**Lab ID:**	1303112-02
Project No:		**Collection Date:**	03/12/13 04:00 PM
Lab Order:	1303112	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **KL**
Surr: Dibromofluoromethane	115	0	85-115		%REC	1	03/22/13 02:26 PM
Surr: Toluene-d8	107	0	85-120		%REC	1	03/22/13 02:26 PM
HEXAVALENT CHROMIUM-WATER		**M3500-CR D**					Analyst: **LM**
Hexavalent Chromium	<0.00800	0.00800	0.0100		mg/L	1	03/13/13 10:28 AM
PH		**M4500-H+ B**					Analyst: **JCG**
pH	7.76	0	0		pH units	1	03/13/13 09:51 AM
TOTAL ORGANIC CARBON		**M5310C**					Analyst: **JCG**
Total Organic Carbon	0.491	0.300	1.00	J	mg/L	1	03/18/13 06:51 PM

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	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT:	Zia Engineering & Environmental	**Client Sample ID:**	Trip Blank
Project:	HELSTF Chromium Spill Groundwater	**Lab ID:**	1303112-03
Project No:		**Collection Date:**	03/12/13 04:00 PM
Lab Order:	1303112	**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	03/22/13 02:51 PM
1,1,1-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,1,2,2-Tetrachloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,1,2-Trichloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,1-Dichloroethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,1-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,1-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,2,3-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:51 PM
1,2,3-Trichloropropane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
1,2,4-Trichlorobenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:51 PM
1,2,4-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:51 PM
1,2-Dibromo-3-chloropropane	<0.00300	0.00300	0.0100		mg/L	1	03/22/13 02:51 PM
1,2-Dibromoethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,2-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
1,2-Dichloroethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
1,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,3,5-Trimethylbenzene	<0.00150	0.00150	0.00500		mg/L	1	03/22/13 02:51 PM
1,3-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
1,3-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
1,4-Dichloro-2-butene	<0.00200	0.00200	0.00200		mg/L	1	03/22/13 02:51 PM
1,4-Dichlorobenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
2,2-Dichloropropane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
2-Butanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:51 PM
2-Chloroethylvinylether	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:51 PM
2-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
2-Hexanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:51 PM
4-Chlorotoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
4-Methyl-2-pentanone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:51 PM
Acetone	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:51 PM
Acrylonitrile	<0.00100	0.00100	0.00300		mg/L	1	03/22/13 02:51 PM
Benzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Bromobenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Bromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Bromodichloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Bromoform	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Bromomethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
Carbon disulfide	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:51 PM
Carbon tetrachloride	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM

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	ND	Not Detected at the Method Detection Limit
RL	Reporting Limit	S	Spike Recovery outside control limits
N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT:	Zia Engineering & Environmental	**Client Sample ID:**	Trip Blank
Project:	HELSTF Chromium Spill Groundwater	**Lab ID:**	1303112-03
Project No:		**Collection Date:**	03/12/13 04:00 PM
Lab Order:	1303112	**Matrix:**	TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
8260 WATER VOLATILES BY GC/MS		**SW8260C**					Analyst: **KL**
Chlorobenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Chloroethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
Chloroform	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
Chloromethane	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
cis-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
cis-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Dibromochloromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Dibromomethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Dichlorodifluoromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Ethylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
Iodomethane	<0.00500	0.00500	0.0150		mg/L	1	03/22/13 02:51 PM
Isopropylbenzene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
m,p-Xylene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:51 PM
Methyl tert-butyl ether	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
Methylene chloride	<0.00250	0.00250	0.00250		mg/L	1	03/22/13 02:51 PM
n-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
n-Propylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
o-Xylene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
p-Isopropyltoluene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
sec-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
Styrene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
tert-Butylbenzene	<0.000300	0.000300	0.00100		mg/L	1	03/22/13 02:51 PM
Tetrachloroethene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:51 PM
Toluene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:51 PM
trans-1,2-Dichloroethene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
trans-1,3-Dichloropropene	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Trichloroethene	<0.000600	0.000600	0.00200		mg/L	1	03/22/13 02:51 PM
Trichlorofluoromethane	<0.000200	0.000200	0.00100		mg/L	1	03/22/13 02:51 PM
Vinyl chloride	<0.000100	0.000100	0.00100		mg/L	1	03/22/13 02:51 PM
Surr: 1,2-Dichloroethane-d4	112	0	70-120		%REC	1	03/22/13 02:51 PM
Surr: 4-Bromofluorobenzene	111	0	75-120		%REC	1	03/22/13 02:51 PM
Surr: Dibromofluoromethane	112	0	85-115		%REC	1	03/22/13 02:51 PM
Surr: Toluene-d8	108	0	85-120		%REC	1	03/22/13 02:51 PM

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	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: *25-Mar-13*

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **GC15_130320A**

The QC data in batch 56459 applies to the following samples: 1303112-01E, 1303112-02E

Sample ID: **LCS-56459** Batch ID: **56459** TestNo: **M8015D** Units: **mg/L**
SampType: **LCS** Run ID: **GC15_130320A** Analysis Date: **3/20/2013 9:55:36 AM** Prep Date: **3/15/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.955	0.100	1.250	0	76.4	50	114			
Surr: Isopropylbenzene	0.0590		0.1000		59.0	47	142			
Surr: Octacosane	0.0984		0.1000		98.4	51	124			

Sample ID: **MB-56459** Batch ID: **56459** TestNo: **M8015D** Units: **mg/L**
SampType: **MBLK** Run ID: **GC15_130320A** Analysis Date: **3/20/2013 10:04:35 AM** Prep Date: **3/15/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<0.0800	0.100								
Surr: Isopropylbenzene	0.0655		0.1000		65.5	47	142			
Surr: Octacosane	0.114		0.1000		114	51	124			

Sample ID: **1303141-01EMS** Batch ID: **56459** TestNo: **M8015D** Units: **mg/L**
SampType: **MS** Run ID: **GC15_130320A** Analysis Date: **3/20/2013 12:01:12 PM** Prep Date: **3/15/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	0.985	0.100	1.250	0	78.8	50	114			
Surr: Isopropylbenzene	0.0626		0.1000		62.6	47	142			
Surr: Octacosane	0.103		0.1000		103	51	124			

Sample ID: **1303141-01EMSD** Batch ID: **56459** TestNo: **M8015D** Units: **mg/L**
SampType: **MSD** Run ID: **GC15_130320A** Analysis Date: **3/20/2013 12:10:11 PM** Prep Date: **3/15/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1.10	0.100	1.250	0	88.0	50	114	11.0	30	
Surr: Isopropylbenzene	0.0642		0.1000		64.2	47	142	0	0	
Surr: Octacosane	0.113		0.1000		113	51	124	0	0	

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_130320A

Sample ID: **ICV-130320** Batch ID: **R65431** TestNo: **M8015D** Units: **mg/L**
SampType: **ICV** Run ID: **GC15_130320A** Analysis Date: **3/20/2013 9:46:36 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	547	0.100	500.0	0	109	80	120			
Surr: Isopropylbenzene	25.1		25.00		100	80	120			
Surr: Octacosane	23.8		25.00		95.3	80	120			

Sample ID: **CCV1-130320** Batch ID: **R65431** TestNo: **M8015D** Units: **mg/L**
SampType: **CCV** Run ID: **GC15_130320A** Analysis Date: **3/20/2013 11:25:17 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	247	0.100	250.0	0	98.7	80	120			
Surr: Isopropylbenzene	12.0		12.50		96.1	80	120			
Surr: Octacosane	11.6		12.50		92.7	80	120			

Sample ID: **CCV2-130320** Batch ID: **R65431** TestNo: **M8015D** Units: **mg/L**
SampType: **CCV** Run ID: **GC15_130320A** Analysis Date: **3/20/2013 12:19:10 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	274	0.100	250.0	0	110	80	120			
Surr: Isopropylbenzene	12.8		12.50		102	80	120			
Surr: Octacosane	12.2		12.50		97.3	80	120			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_130320B

Sample ID: **ICV1-130320** Batch ID: **R65418** TestNo: **SW6020A** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS2_130320B** Analysis Date: **3/20/2013 11:08:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.105	0.00500	0.100	0	105	90	110			

Sample ID: **CCV1-130320** Batch ID: **R65418** TestNo: **SW6020A** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS2_130320B** Analysis Date: **3/20/2013 1:00:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.209	0.00500	0.200	0	104	90	110			

Sample ID: **CCV2-130320** Batch ID: **R65418** TestNo: **SW6020A** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS2_130320B** Analysis Date: **3/20/2013 3:23:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.211	0.00500	0.200	0	106	90	110			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_130319A

The QC data in batch 56469 applies to the following samples: 1303112-01C, 1303112-02C

Sample ID: **MB-56469** Batch ID: **56469** TestNo: **SW6020A** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS3_130319A** Analysis Date: **3/19/2013 1:32:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	<0.00200	0.00500								

Sample ID: **LCS-56469** Batch ID: **56469** TestNo: **SW6020A** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS3_130319A** Analysis Date: **3/19/2013 1:38:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.198	0.00500	0.200	0	98.8	80	120			

Sample ID: **LCSD-56469** Batch ID: **56469** TestNo: **SW6020A** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS3_130319A** Analysis Date: **3/19/2013 1:44:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.191	0.00500	0.200	0	95.4	80	120	3.45	20	

Sample ID: **1303141-01C SD** Batch ID: **56469** TestNo: **SW6020A** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS3_130319A** Analysis Date: **3/19/2013 2:02:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	<0.0100	0.0250	0	0.00747				0	10	

Sample ID: **1303141-01C PDS** Batch ID: **56469** TestNo: **SW6020A** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS3_130319A** Analysis Date: **3/19/2013 3:02:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.183	0.00500	0.200	0.00747	88.0	80	120			

Sample ID: **1303141-01C MS** Batch ID: **56469** TestNo: **SW6020A** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS3_130319A** Analysis Date: **3/19/2013 3:08:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.166	0.00500	0.200	0.00747	79.1	80	120			S

Sample ID: **1303141-01C MSD** Batch ID: **56469** TestNo: **SW6020A** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS3_130319A** Analysis Date: **3/19/2013 3:14:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.180	0.00500	0.200	0.00747	86.2	80	120	8.22	20	

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_130319A

Sample ID: **ICV1-130319**	Batch ID: **R65396**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS3_130319A**	Analysis Date: **3/19/2013 1:07:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0987	0.00500	0.100	0	98.7	90	110			

Sample ID: **CCV1-130319**	Batch ID: **R65396**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS3_130319A**	Analysis Date: **3/19/2013 3:20:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.184	0.00500	0.200	0	91.8	90	110			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **GCMS7_130322A**

The QC data in batch 56560 applies to the following samples: 1303112-01A, 1303112-02A, 1303112-03A

Sample ID: **LCS-56560**	Batch ID: **56560**	TestNo: **SW8260C**	Units: **mg/L**
SampType: **LCS**	Run ID: **GCMS7_130322A**	Analysis Date: **3/22/2013 11:13:00 AM**	Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0231	0.00100	0.0232	0	99.4	80	130			
1,1,1-Trichloroethane	0.0226	0.00100	0.0232	0	97.5	65	130			
1,1,2,2-Tetrachloroethane	0.0242	0.00100	0.0232	0	104	65	130			
1,1,2-Trichloroethane	0.0222	0.00100	0.0232	0	95.6	75	125			
1,1-Dichloroethane	0.0224	0.00100	0.0232	0	96.4	70	135			
1,1-Dichloroethene	0.0219	0.00100	0.0232	0	94.4	70	130			
1,1-Dichloropropene	0.0225	0.00100	0.0232	0	97.1	75	130			
1,2,3-Trichlorobenzene	0.0247	0.00500	0.0232	0	106	55	140			
1,2,3-Trichloropropane	0.0234	0.00100	0.0232	0	101	75	125			
1,2,4-Trichlorobenzene	0.0241	0.00500	0.0232	0	104	65	135			
1,2,4-Trimethylbenzene	0.0242	0.00500	0.0232	0	104	75	130			
1,2-Dibromo-3-chloropropane	0.0249	0.0100	0.0232	0	107	50	130			
1,2-Dibromoethane	0.0240	0.00100	0.0232	0	104	80	120			
1,2-Dichlorobenzene	0.0239	0.00100	0.0232	0	103	70	120			
1,2-Dichloroethane	0.0227	0.00100	0.0232	0	97.8	70	130			
1,2-Dichloropropane	0.0221	0.00100	0.0232	0	95.1	75	125			
1,3,5-Trimethylbenzene	0.0238	0.00500	0.0232	0	103	75	130			
1,3-Dichlorobenzene	0.0237	0.00100	0.0232	0	102	75	125			
1,3-Dichloropropane	0.0237	0.00100	0.0232	0	102	75	125			
1,4-Dichloro-2-butene	0.0247	0.00200	0.0232	0	106	50	150			
1,4-Dichlorobenzene	0.0237	0.00100	0.0232	0	102	75	125			
2,2-Dichloropropane	0.0214	0.00100	0.0232	0	92.4	70	135			
2-Butanone	0.110	0.0150	0.116	0	94.8	30	150			
2-Chloroethylvinylether	0.0220	0.0150	0.0232	0	94.7	50	150			
2-Chlorotoluene	0.0238	0.00100	0.0232	0	102	75	125			
2-Hexanone	0.118	0.0150	0.116	0	101	55	130			
4-Chlorotoluene	0.0239	0.00100	0.0232	0	103	75	130			
4-Methyl-2-pentanone	0.119	0.0150	0.116	0	102	60	135			
Acetone	0.115	0.0150	0.116	0	99.4	40	140			
Acrylonitrile	0.0441	0.00300	0.0464	0	95.1	50	150			
Benzene	0.0224	0.00100	0.0232	0	96.6	80	120			
Bromobenzene	0.0237	0.00100	0.0232	0	102	75	125			
Bromochloromethane	0.0207	0.00100	0.0232	0	89.1	65	130			
Bromodichloromethane	0.0230	0.00100	0.0232	0	99.0	75	120			
Bromoform	0.0228	0.00100	0.0232	0	98.4	70	130			
Bromomethane	0.0260	0.00100	0.0232	0	112	30	145			
Carbon disulfide	0.0220	0.0150	0.0232	0	94.7	35	160			
Carbon tetrachloride	0.0226	0.00100	0.0232	0	97.2	65	140			
Chlorobenzene	0.0232	0.00100	0.0232	0	100	80	120			
Chloroethane	0.0219	0.00100	0.0232	0	94.4	60	135			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **GCMS7_130322A**

Sample ID: **LCS-56560** Batch ID: **56560** TestNo: **SW8260C** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 11:13:00 AM** Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloroform	0.0223	0.00100	0.0232	0	96.1	65	135			
Chloromethane	0.0202	0.00100	0.0232	0	86.9	40	125			
cis-1,2-Dichloroethene	0.0229	0.00100	0.0232	0	98.5	70	125			
cis-1,3-Dichloropropene	0.0228	0.00100	0.0232	0	98.2	70	130			
Dibromochloromethane	0.0242	0.00100	0.0232	0	104	60	135			
Dibromomethane	0.0228	0.00100	0.0232	0	98.1	75	125			
Dichlorodifluoromethane	0.0203	0.00100	0.0232	0	87.4	30	155			
Ethylbenzene	0.0232	0.00100	0.0232	0	100	75	125			
Iodomethane	0.0206	0.0150	0.0232	0	88.7	50	150			
Isopropylbenzene	0.0234	0.00100	0.0232	0	101	75	125			
m,p-Xylene	0.0460	0.00200	0.0464	0	99.1	75	130			
Methyl tert-butyl ether	0.0227	0.00100	0.0232	0	97.8	65	125			
Methylene chloride	0.0226	0.00250	0.0232	0	97.5	55	140			
n-Butylbenzene	0.0248	0.00100	0.0232	0	107	70	135			
n-Propylbenzene	0.0241	0.00100	0.0232	0	104	70	130			
o-Xylene	0.0231	0.00100	0.0232	0	99.4	80	120			
p-Isopropyltoluene	0.0240	0.00100	0.0232	0	103	75	130			
sec-Butylbenzene	0.0242	0.00100	0.0232	0	104	70	125			
Styrene	0.0231	0.00100	0.0232	0	99.7	65	135			
tert-Butylbenzene	0.0237	0.00100	0.0232	0	102	70	130			
Tetrachloroethene	0.0235	0.00200	0.0232	0	101	45	150			
Toluene	0.0220	0.00200	0.0232	0	94.6	75	120			
trans-1,2-Dichloroethene	0.0223	0.00100	0.0232	0	96.1	60	140			
trans-1,3-Dichloropropene	0.0227	0.00100	0.0232	0	98.0	55	140			
Trichloroethene	0.0222	0.00200	0.0232	0	95.7	70	125			
Trichlorofluoromethane	0.0224	0.00100	0.0232	0	96.6	60	145			
Vinyl chloride	0.0219	0.00100	0.0232	0	94.5	50	145			
Surr: 1,2-Dichloroethane-d4	208		200.0		104	70	120			
Surr: 4-Bromofluorobenzene	207		200.0		103	75	120			
Surr: Dibromofluoromethane	201		200.0		100	85	115			
Surr: Toluene-d8	211		200.0		106	85	120			

Sample ID: **MB-56560** Batch ID: **56560** TestNo: **SW8260C** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 12:01:00 PM** Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	<0.000200	0.00100								
1,1,1-Trichloroethane	<0.000200	0.00100								
1,1,2,2-Tetrachloroethane	<0.000200	0.00100								
1,1,2-Trichloroethane	<0.000200	0.00100								
1,1-Dichloroethane	<0.000200	0.00100								

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_130322A

Sample ID: **MB-56560**	Batch ID: **56560**	TestNo: **SW8260C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GCMS7_130322A**	Analysis Date: **3/22/2013 12:01:00 PM**	Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	<0.000200	0.00100								
1,1-Dichloropropene	<0.000200	0.00100								
1,2,3-Trichlorobenzene	<0.00150	0.00500								
1,2,3-Trichloropropane	<0.000300	0.00100								
1,2,4-Trichlorobenzene	<0.00150	0.00500								
1,2,4-Trimethylbenzene	<0.00150	0.00500								
1,2-Dibromo-3-chloropropane	<0.00300	0.0100								
1,2-Dibromoethane	<0.000200	0.00100								
1,2-Dichlorobenzene	<0.000300	0.00100								
1,2-Dichloroethane	<0.000300	0.00100								
1,2-Dichloropropane	<0.000200	0.00100								
1,3,5-Trimethylbenzene	<0.00150	0.00500								
1,3-Dichlorobenzene	<0.000300	0.00100								
1,3-Dichloropropane	<0.000200	0.00100								
1,4-Dichloro-2-butene	<0.00200	0.00200								
1,4-Dichlorobenzene	<0.000300	0.00100								
2,2-Dichloropropane	<0.000200	0.00100								
2-Butanone	<0.00500	0.0150								
2-Chloroethylvinylether	<0.00500	0.0150								
2-Chlorotoluene	<0.000300	0.00100								
2-Hexanone	<0.00500	0.0150								
4-Chlorotoluene	<0.000300	0.00100								
4-Methyl-2-pentanone	<0.00500	0.0150								
Acetone	<0.00500	0.0150								
Acrylonitrile	<0.00100	0.00300								
Benzene	<0.000200	0.00100								
Bromobenzene	<0.000200	0.00100								
Bromochloromethane	<0.000200	0.00100								
Bromodichloromethane	<0.000200	0.00100								
Bromoform	<0.000200	0.00100								
Bromomethane	<0.000300	0.00100								
Carbon disulfide	<0.00500	0.0150								
Carbon tetrachloride	<0.000200	0.00100								
Chlorobenzene	<0.000200	0.00100								
Chloroethane	<0.000300	0.00100								
Chloroform	<0.000300	0.00100								
Chloromethane	<0.000300	0.00100								
cis-1,2-Dichloroethene	<0.000200	0.00100								
cis-1,3-Dichloropropene	<0.000200	0.00100								
Dibromochloromethane	<0.000200	0.00100								
Dibromomethane	<0.000200	0.00100								

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_130322A

Sample ID: **MB-56560** Batch ID: **56560** TestNo: **SW8260C** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 12:01:00 PM** Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	<0.000200	0.00100								
Ethylbenzene	<0.000300	0.00100								
Iodomethane	<0.00500	0.0150								
Isopropylbenzene	<0.000200	0.00100								
m,p-Xylene	<0.000600	0.00200								
Methyl tert-butyl ether	<0.000300	0.00100								
Methylene chloride	<0.00250	0.00250								
n-Butylbenzene	<0.000300	0.00100								
n-Propylbenzene	<0.000300	0.00100								
o-Xylene	<0.000300	0.00100								
p-Isopropyltoluene	<0.000300	0.00100								
sec-Butylbenzene	<0.000300	0.00100								
Styrene	<0.000200	0.00100								
tert-Butylbenzene	<0.000300	0.00100								
Tetrachloroethene	<0.000600	0.00200								
Toluene	<0.000600	0.00200								
trans-1,2-Dichloroethene	<0.000200	0.00100								
trans-1,3-Dichloropropene	<0.000200	0.00100								
Trichloroethene	<0.000600	0.00200								
Trichlorofluoromethane	<0.000200	0.00100								
Vinyl chloride	<0.000100	0.00100								
Surr: 1,2-Dichloroethane-d4	215		200.0		107	70	120			
Surr: 4-Bromofluorobenzene	215		200.0		108	75	120			
Surr: Dibromofluoromethane	216		200.0		108	85	115			
Surr: Toluene-d8	210		200.0		105	85	120			

Sample ID: **1303141-01AMS** Batch ID: **56560** TestNo: **SW8260C** Units: **mg/L**
SampType: **MS** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 8:30:00 PM** Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0218	0.00100	0.0232	0	93.8	80	130			
1,1,1-Trichloroethane	0.0218	0.00100	0.0232	0	93.8	65	130			
1,1,2,2-Tetrachloroethane	0.0264	0.00100	0.0232	0	114	65	130			
1,1,2-Trichloroethane	0.0216	0.00100	0.0232	0	92.9	75	125			
1,1-Dichloroethane	0.0222	0.00100	0.0232	0	95.7	70	135			
1,1-Dichloroethene	0.0212	0.00100	0.0232	0	91.3	70	130			
1,1-Dichloropropene	0.0216	0.00100	0.0232	0	93.2	75	130			
1,2,3-Trichlorobenzene	0.0225	0.00500	0.0232	0	96.9	55	140			
1,2,3-Trichloropropane	0.0259	0.00100	0.0232	0	112	75	125			
1,2,4-Trichlorobenzene	0.0226	0.00500	0.0232	0	97.5	65	135			
1,2,4-Trimethylbenzene	0.0253	0.00500	0.0232	0	109	75	130			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **GCMS7_130322A**

Sample ID: **1303141-01AMS**	Batch ID: **56560**	TestNo: **SW8260C**	Units: **mg/L**
SampType: **MS**	Run ID: **GCMS7_130322A**	Analysis Date: **3/22/2013 8:30:00 PM**	Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	0.0245	0.0100	0.0232	0	106	50	130			
1,2-Dibromoethane	0.0239	0.00100	0.0232	0	103	80	120			
1,2-Dichlorobenzene	0.0247	0.00100	0.0232	0	106	70	120			
1,2-Dichloroethane	0.0223	0.00100	0.0232	0	96.2	70	130			
1,2-Dichloropropane	0.0215	0.00100	0.0232	0	92.7	75	125			
1,3,5-Trimethylbenzene	0.0253	0.00500	0.0232	0	109	75	130			
1,3-Dichlorobenzene	0.0243	0.00100	0.0232	0	105	75	125			
1,3-Dichloropropane	0.0240	0.00100	0.0232	0	103	75	125			
1,4-Dichloro-2-butene	0.0248	0.00200	0.0232	0	107	50	150			
1,4-Dichlorobenzene	0.0244	0.00100	0.0232	0	105	75	125			
2,2-Dichloropropane	0.0208	0.00100	0.0232	0	89.7	70	135			
2-Butanone	0.107	0.0150	0.116	0	92.4	30	150			
2-Chloroethylvinylether	<0.00500	0.0150	0.0232	0	0	50	150			S
2-Chlorotoluene	0.0252	0.00100	0.0232	0	109	75	125			
2-Hexanone	0.126	0.0150	0.116	0	108	55	130			
4-Chlorotoluene	0.0251	0.00100	0.0232	0	108	75	130			
4-Methyl-2-pentanone	0.127	0.0150	0.116	0	109	60	135			
Acetone	0.127	0.0150	0.116	0.0121	99.2	40	140			
Acrylonitrile	0.0440	0.00300	0.0464	0	94.7	50	150			
Benzene	0.0217	0.00100	0.0232	0	93.4	80	120			
Bromobenzene	0.0246	0.00100	0.0232	0	106	75	125			
Bromochloromethane	0.0224	0.00100	0.0232	0	96.8	65	130			
Bromodichloromethane	0.0214	0.00100	0.0232	0.000300	91.0	75	120			
Bromoform	0.0199	0.00100	0.0232	0	85.8	70	130			
Bromomethane	0.00742	0.00100	0.0232	0	32.0	30	145			
Carbon disulfide	0.0214	0.0150	0.0232	0	92.0	35	160			
Carbon tetrachloride	0.0199	0.00100	0.0232	0	85.9	65	140			
Chlorobenzene	0.0233	0.00100	0.0232	0	101	80	120			
Chloroethane	0.0230	0.00100	0.0232	0	99.2	60	135			
Chloroform	0.0275	0.00100	0.0232	0.00610	92.3	65	135			
Chloromethane	0.0191	0.00100	0.0232	0	82.5	40	125			
cis-1,2-Dichloroethene	0.0220	0.00100	0.0232	0	94.9	70	125			
cis-1,3-Dichloropropene	0.0203	0.00100	0.0232	0	87.4	70	130			
Dibromochloromethane	0.0221	0.00100	0.0232	0	95.2	60	135			
Dibromomethane	0.0220	0.00100	0.0232	0	94.7	75	125			
Dichlorodifluoromethane	0.0199	0.00100	0.0232	0	85.6	30	155			
Ethylbenzene	0.0233	0.00100	0.0232	0	100	75	125			
Iodomethane	0.00594	0.0150	0.0232	0	25.6	50	150			S
Isopropylbenzene	0.0235	0.00100	0.0232	0	101	75	125			
m,p-Xylene	0.0463	0.00200	0.0464	0	99.8	75	130			
Methyl tert-butyl ether	0.0213	0.00100	0.0232	0	91.9	65	125			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_130322A

Sample ID: **1303141-01AMS** Batch ID: **56560** TestNo: **SW8260C** Units: **mg/L**
SampType: **MS** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 8:30:00 PM** Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methylene chloride	0.0224	0.00250	0.0232	0	96.6	55	140			
n-Butylbenzene	0.0251	0.00100	0.0232	0	108	70	135			
n-Propylbenzene	0.0253	0.00100	0.0232	0	109	70	130			
o-Xylene	0.0235	0.00100	0.0232	0	101	80	120			
p-Isopropyltoluene	0.0245	0.00100	0.0232	0	106	75	130			
sec-Butylbenzene	0.0251	0.00100	0.0232	0	108	70	125			
Styrene	0.0199	0.00100	0.0232	0	85.6	65	135			
tert-Butylbenzene	0.0249	0.00100	0.0232	0	107	70	130			
Tetrachloroethene	0.0225	0.00200	0.0232	0	97.2	45	150			
Toluene	0.0212	0.00200	0.0232	0	91.5	75	120			
trans-1,2-Dichloroethene	0.0221	0.00100	0.0232	0	95.2	60	140			
trans-1,3-Dichloropropene	0.0201	0.00100	0.0232	0	86.6	55	140			
Trichloroethene	0.0210	0.00200	0.0232	0	90.6	70	125			
Trichlorofluoromethane	0.0226	0.00100	0.0232	0	97.3	60	145			
Vinyl chloride	0.0204	0.00100	0.0232	0	87.7	50	145			
Surr: 1,2-Dichloroethane-d4	214		200.0		107	70	120			
Surr: 4-Bromofluorobenzene	220		200.0		110	75	120			
Surr: Dibromofluoromethane	210		200.0		105	85	115			
Surr: Toluene-d8	224		200.0		112	85	120			

Sample ID: **1303141-01AMSD** Batch ID: **56560** TestNo: **SW8260C** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 8:54:00 PM** Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0222	0.00100	0.0232	0	95.5	80	130	1.73	30	
1,1,1-Trichloroethane	0.0222	0.00100	0.0232	0	95.9	65	130	2.18	30	
1,1,2,2-Tetrachloroethane	0.0270	0.00100	0.0232	0	117	65	130	2.51	30	
1,1,2-Trichloroethane	0.0216	0.00100	0.0232	0	93.3	75	125	0.463	30	
1,1-Dichloroethane	0.0230	0.00100	0.0232	0	99.1	70	135	3.50	30	
1,1-Dichloroethene	0.0220	0.00100	0.0232	0	94.7	70	130	3.66	30	
1,1-Dichloropropene	0.0217	0.00100	0.0232	0	93.5	75	130	0.323	30	
1,2,3-Trichlorobenzene	0.0249	0.00500	0.0232	0	107	55	140	10.3	30	
1,2,3-Trichloropropane	0.0265	0.00100	0.0232	0	114	75	125	2.52	30	
1,2,4-Trichlorobenzene	0.0244	0.00500	0.0232	0	105	65	135	7.53	30	
1,2,4-Trimethylbenzene	0.0265	0.00500	0.0232	0	114	75	130	4.40	30	
1,2-Dibromo-3-chloropropane	0.0262	0.0100	0.0232	0	113	50	130	6.47	30	
1,2-Dibromoethane	0.0244	0.00100	0.0232	0	105	80	120	2.07	30	
1,2-Dichlorobenzene	0.0256	0.00100	0.0232	0	110	70	120	3.74	30	
1,2-Dichloroethane	0.0226	0.00100	0.0232	0	97.6	70	130	1.47	30	
1,2-Dichloropropane	0.0219	0.00100	0.0232	0	94.4	75	125	1.84	30	
1,3,5-Trimethylbenzene	0.0263	0.00500	0.0232	0	114	75	130	4.03	30	

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **GCMS7_130322A**

Sample ID: **1303141-01AMSD** Batch ID: **56560** TestNo: **SW8260C** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 8:54:00 PM** Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	0.0254	0.00100	0.0232	0	109	75	125	4.27	30	
1,3-Dichloropropane	0.0244	0.00100	0.0232	0	105	75	125	1.49	30	
1,4-Dichloro-2-butene	0.0252	0.00200	0.0232	0	109	50	150	1.88	30	
1,4-Dichlorobenzene	0.0254	0.00100	0.0232	0	110	75	125	4.30	30	
2,2-Dichloropropane	0.0198	0.00100	0.0232	0	85.4	70	135	4.88	30	
2-Butanone	0.106	0.0150	0.116	0	91.5	30	150	0.975	30	
2-Chloroethylvinylether	<0.00500	0.0150	0.0232	0	0	50	150	0	30	S
2-Chlorotoluene	0.0262	0.00100	0.0232	0	113	75	125	3.96	30	
2-Hexanone	0.127	0.0150	0.116	0	109	55	130	0.997	30	
4-Chlorotoluene	0.0262	0.00100	0.0232	0	113	75	130	4.52	30	
4-Methyl-2-pentanone	0.128	0.0150	0.116	0	110	60	135	0.558	30	
Acetone	0.125	0.0150	0.116	0.0121	97.4	40	140	1.74	30	
Acrylonitrile	0.0457	0.00300	0.0464	0	98.5	50	150	3.90	30	
Benzene	0.0223	0.00100	0.0232	0	96.2	80	120	3.00	30	
Bromobenzene	0.0254	0.00100	0.0232	0	110	75	125	3.28	30	
Bromochloromethane	0.0203	0.00100	0.0232	0	87.5	65	130	10.1	30	
Bromodichloromethane	0.0221	0.00100	0.0232	0.000300	94.1	75	120	3.22	30	
Bromoform	0.0207	0.00100	0.0232	0	89.4	70	130	4.09	30	
Bromomethane	0.0112	0.00100	0.0232	0	48.4	30	145	40.8	30	R
Carbon disulfide	0.0216	0.0150	0.0232	0	93.1	35	160	1.16	30	
Carbon tetrachloride	0.0206	0.00100	0.0232	0	88.8	65	140	3.30	30	
Chlorobenzene	0.0241	0.00100	0.0232	0	104	80	120	3.16	30	
Chloroethane	0.0233	0.00100	0.0232	0	100	60	135	1.30	30	
Chloroform	0.0281	0.00100	0.0232	0.00610	94.7	65	135	2.05	30	
Chloromethane	0.0202	0.00100	0.0232	0	87.1	40	125	5.49	30	
cis-1,2-Dichloroethene	0.0232	0.00100	0.0232	0	100	70	125	5.26	30	
cis-1,3-Dichloropropene	0.0202	0.00100	0.0232	0	87.0	70	130	0.395	30	
Dibromochloromethane	0.0228	0.00100	0.0232	0	98.4	60	135	3.29	30	
Dibromomethane	0.0222	0.00100	0.0232	0	95.8	75	125	1.18	30	
Dichlorodifluoromethane	0.0206	0.00100	0.0232	0	88.9	30	155	3.80	30	
Ethylbenzene	0.0241	0.00100	0.0232	0	104	75	125	3.54	30	
Iodomethane	0.00917	0.0150	0.0232	0	39.5	50	150	42.8	30	SR
Isopropylbenzene	0.0245	0.00100	0.0232	0	106	75	125	4.17	30	
m,p-Xylene	0.0481	0.00200	0.0464	0	104	75	130	3.79	30	
Methyl tert-butyl ether	0.0215	0.00100	0.0232	0	92.6	65	125	0.701	30	
Methylene chloride	0.0230	0.00250	0.0232	0	98.9	55	140	2.38	30	
n-Butylbenzene	0.0266	0.00100	0.0232	0	115	70	135	5.99	30	
n-Propylbenzene	0.0265	0.00100	0.0232	0	114	70	130	4.71	30	
o-Xylene	0.0244	0.00100	0.0232	0	105	80	120	3.84	30	
p-Isopropyltoluene	0.0259	0.00100	0.0232	0	112	75	130	5.56	30	
sec-Butylbenzene	0.0263	0.00100	0.0232	0	113	70	125	4.48	30	

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **GCMS7_130322A**

Sample ID: **1303141-01AMSD** Batch ID: **56560** TestNo: **SW8260C** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 8:54:00 PM** Prep Date: **3/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Styrene	0.0205	0.00100	0.0232	0	88.3	65	135	3.07	30	
tert-Butylbenzene	0.0260	0.00100	0.0232	0	112	70	130	4.28	30	
Tetrachloroethene	0.0231	0.00200	0.0232	0	99.4	45	150	2.32	30	
Toluene	0.0216	0.00200	0.0232	0	93.3	75	120	2.01	30	
trans-1,2-Dichloroethene	0.0218	0.00100	0.0232	0	93.8	60	140	1.51	30	
trans-1,3-Dichloropropene	0.0206	0.00100	0.0232	0	88.6	55	140	2.31	30	
Trichloroethene	0.0213	0.00200	0.0232	0	91.9	70	125	1.46	30	
Trichlorofluoromethane	0.0231	0.00100	0.0232	0	99.4	60	145	2.15	30	
Vinyl chloride	0.0209	0.00100	0.0232	0	90.2	50	145	2.76	30	
Surr: 1,2-Dichloroethane-d4	216		200.0		108	70	120	0	0	
Surr: 4-Bromofluorobenzene	220		200.0		110	75	120	0	0	
Surr: Dibromofluoromethane	212		200.0		106	85	115	0	0	
Surr: Toluene-d8	224		200.0		112	85	120	0	0	

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS7_130322A

Sample ID: **ICV-130322** Batch ID: **R65454** TestNo: **SW8260C** Units: **mg/L**
SampType: **ICV** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 10:48:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0492	0.00100	0.0464	0	106	80	120			
1,1,1-Trichloroethane	0.0456	0.00100	0.0464	0	98.2	80	120			
1,1,2,2-Tetrachloroethane	0.0515	0.00100	0.0464	0	111	80	120			
1,1,2-Trichloroethane	0.0466	0.00100	0.0464	0	100	80	120			
1,1-Dichloroethane	0.0438	0.00100	0.0464	0	94.5	80	120			
1,1-Dichloroethene	0.0444	0.00100	0.0464	0	95.8	80	120			
1,1-Dichloropropene	0.0462	0.00100	0.0464	0	99.6	80	120			
1,2,3-Trichlorobenzene	0.0487	0.00500	0.0464	0	105	80	120			
1,2,3-Trichloropropane	0.0510	0.00100	0.0464	0	110	80	120			
1,2,4-Trichlorobenzene	0.0487	0.00500	0.0464	0	105	80	120			
1,2,4-Trimethylbenzene	0.0498	0.00500	0.0464	0	107	80	120			
1,2-Dibromo-3-chloropropane	0.0505	0.0100	0.0464	0	109	80	120			
1,2-Dibromoethane	0.0489	0.00100	0.0464	0	105	80	120			
1,2-Dichlorobenzene	0.0494	0.00100	0.0464	0	107	80	120			
1,2-Dichloroethane	0.0452	0.00100	0.0464	0	97.3	80	120			
1,2-Dichloropropane	0.0448	0.00100	0.0464	0	96.5	80	120			
1,3,5-Trimethylbenzene	0.0498	0.00500	0.0464	0	107	80	120			
1,3-Dichlorobenzene	0.0491	0.00100	0.0464	0	106	80	120			
1,3-Dichloropropane	0.0479	0.00100	0.0464	0	103	80	120			
1,4-Dichloro-2-butene	0.0526	0.00200	0.0464	0	113	80	120			
1,4-Dichlorobenzene	0.0488	0.00100	0.0464	0	105	80	120			
2,2-Dichloropropane	0.0467	0.00100	0.0464	0	101	80	120			
2-Butanone	0.224	0.0150	0.232	0	96.5	80	120			
2-Chloroethylvinylether	0.0463	0.0150	0.0464	0	99.7	80	120			
2-Chlorotoluene	0.0490	0.00100	0.0464	0	106	80	120			
2-Hexanone	0.245	0.0150	0.232	0	106	80	120			
4-Chlorotoluene	0.0492	0.00100	0.0464	0	106	80	120			
4-Methyl-2-pentanone	0.248	0.0150	0.232	0	107	80	120			
Acetone	0.230	0.0150	0.232	0	99.1	80	120			
Acrylonitrile	0.0847	0.00300	0.0928	0	91.3	60	140			
Benzene	0.0454	0.00100	0.0464	0	97.9	80	120			
Bromobenzene	0.0491	0.00100	0.0464	0	106	80	120			
Bromochloromethane	0.0472	0.00100	0.0464	0	102	80	120			
Bromodichloromethane	0.0470	0.00100	0.0464	0	101	80	120			
Bromoform	0.0476	0.00100	0.0464	0	103	80	120			
Bromomethane	0.0438	0.00100	0.0464	0	94.3	80	120			
Carbon disulfide	0.0440	0.0150	0.0464	0	94.8	80	120			
Carbon tetrachloride	0.0471	0.00100	0.0464	0	102	80	120			
Chlorobenzene	0.0473	0.00100	0.0464	0	102	80	120			
Chloroethane	0.0378	0.00100	0.0464	0	81.6	80	120			
Chloroform	0.0440	0.00100	0.0464	0	94.9	80	120			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **GCMS7_130322A**

Sample ID: **ICV-130322** Batch ID: **R65454** TestNo: **SW8260C** Units: **mg/L**
SampType: **ICV** Run ID: **GCMS7_130322A** Analysis Date: **3/22/2013 10:48:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloromethane	0.0404	0.00100	0.0464	0	87.1	80	120			
cis-1,2-Dichloroethene	0.0447	0.00100	0.0464	0	96.3	80	120			
cis-1,3-Dichloropropene	0.0471	0.00100	0.0464	0	101	80	120			
Dibromochloromethane	0.0514	0.00100	0.0464	0	111	80	120			
Dibromomethane	0.0453	0.00100	0.0464	0	97.6	80	120			
Dichlorodifluoromethane	0.0402	0.00100	0.0464	0	86.7	80	120			
Ethylbenzene	0.0476	0.00100	0.0464	0	103	80	120			
Iodomethane	0.0432	0.0150	0.0464	0	93.1	80	120			
Isopropylbenzene	0.0477	0.00100	0.0464	0	103	80	120			
m,p-Xylene	0.0948	0.00200	0.0928	0	102	80	120			
Methyl tert-butyl ether	0.0462	0.00100	0.0464	0	99.6	80	120			
Methylene chloride	0.0444	0.00250	0.0464	0	95.6	80	120			
n-Butylbenzene	0.0518	0.00100	0.0464	0	112	80	120			
n-Propylbenzene	0.0497	0.00100	0.0464	0	107	80	120			
o-Xylene	0.0473	0.00100	0.0464	0	102	80	120			
p-Isopropyltoluene	0.0500	0.00100	0.0464	0	108	80	120			
sec-Butylbenzene	0.0497	0.00100	0.0464	0	107	80	120			
Styrene	0.0475	0.00100	0.0464	0	102	80	120			
tert-Butylbenzene	0.0491	0.00100	0.0464	0	106	80	120			
Tetrachloroethene	0.0481	0.00200	0.0464	0	104	80	120			
Toluene	0.0452	0.00200	0.0464	0	97.4	80	120			
trans-1,2-Dichloroethene	0.0448	0.00100	0.0464	0	96.6	80	120			
trans-1,3-Dichloropropene	0.0483	0.00100	0.0464	0	104	80	120			
Trichloroethene	0.0458	0.00200	0.0464	0	98.6	80	120			
Trichlorofluoromethane	0.0449	0.00100	0.0464	0	96.7	80	120			
Vinyl chloride	0.0427	0.00100	0.0464	0	92.1	80	120			
Surr: 1,2-Dichloroethane-d4	196		200.0		98.1	70	120			
Surr: 4-Bromofluorobenzene	208		200.0		104	75	120			
Surr: Dibromofluoromethane	198		200.0		98.9	85	115			
Surr: Toluene-d8	208		200.0		104	85	120			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_130313A

The QC data in batch 56411 applies to the following samples: 1303112-01D, 1303112-02D

Sample ID: **1303102-01ADUP**	Batch ID: **56411**	TestNo: **M4500-H+ B**	Units: **pH units**
SampType: **DUP**	Run ID: **TITRATOR_130313A**	Analysis Date: **3/13/2013 9:44:00 AM**	Prep Date: **3/13/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.90	0	0	7.920				0.253	5	

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_130313A

Sample ID: **ICV-130313**	Batch ID: **R65300**	TestNo: **M4500-H+ B**	Units: **pH units**
SampType: **ICV**	Run ID: **TITRATOR_130313A**	Analysis Date: **3/13/2013 9:40:00 AM**	Prep Date: **3/13/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	9.99	0	10.00	0	99.9	99	101			

Sample ID: **CCV1-130313**	Batch ID: **R65300**	TestNo: **M4500-H+ B**	Units: **pH units**
SampType: **CCV**	Run ID: **TITRATOR_130313A**	Analysis Date: **3/13/2013 9:52:00 AM**	Prep Date: **3/13/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.05	0	7.000	0	101	97.1	102.9			

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: TOC_130318A

The QC data in batch 56471 applies to the following samples: 1303112-01B, 1303112-02B

Sample ID: **MB-56471** Batch ID: **56471** TestNo: **M5310C** Units: **mg/L**
SampType: **MBLK** Run ID: **TOC_130318A** Analysis Date: **3/18/2013 4:24:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	<0.300	1.00								

Sample ID: **LCS-56471** Batch ID: **56471** TestNo: **M5310C** Units: **mg/L**
SampType: **LCS** Run ID: **TOC_130318A** Analysis Date: **3/18/2013 4:43:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	9.12	1.00	10.00	0	91.2	80	120			

Sample ID: **1303141-01BMS** Batch ID: **56471** TestNo: **M5310C** Units: **mg/L**
SampType: **MS** Run ID: **TOC_130318A** Analysis Date: **3/18/2013 5:23:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	10.1	1.00	10.00	0.6062	95.0	80	120			

Sample ID: **1303141-01BMSD** Batch ID: **56471** TestNo: **M5310C** Units: **mg/L**
SampType: **MSD** Run ID: **TOC_130318A** Analysis Date: **3/18/2013 5:43:00 PM** Prep Date: **3/18/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	10.1	1.00	10.00	0.6062	95.2	80	120	0.142	15	

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: TOC_130318A

Sample ID: **ICV-130318** Batch ID: **R65373** TestNo: **M5310C** Units: **mg/L**
SampType: **ICV** Run ID: **TOC_130318A** Analysis Date: **3/18/2013 4:06:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	14.8	1.00	15.00	0	98.4	90	110			

Sample ID: **CCV1-130318** Batch ID: **R65373** TestNo: **M5310C** Units: **mg/L**
SampType: **CCV** Run ID: **TOC_130318A** Analysis Date: **3/18/2013 7:32:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	9.11	1.00	10.00	0	91.1	80	120			

Sample ID: **CCV2-130318** Batch ID: **R65373** TestNo: **M5310C** Units: **mg/L**
SampType: **CCV** Run ID: **TOC_130318A** Analysis Date: **3/18/2013 10:53:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Organic Carbon	9.20	1.00	10.00	0	92.0	80	120			

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **UV/VIS_2_130313A**

The QC data in batch 56415 applies to the following samples: 1303112-01D, 1303112-02D

Sample ID: **MB-56415** Batch ID: **56415** TestNo: **M3500-Cr D** Units: **mg/L**
SampType: **MBLK** Run ID: **UV/VIS_2_130313A** Analysis Date: **3/13/2013 10:24:00 AM** Prep Date: **3/13/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	<0.00800	0.0100								

Sample ID: **LCS-56415** Batch ID: **56415** TestNo: **M3500-Cr D** Units: **mg/L**
SampType: **LCS** Run ID: **UV/VIS_2_130313A** Analysis Date: **3/13/2013 10:24:00 AM** Prep Date: **3/13/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.0979	0.0100	0.100	0	97.9	85	115			

Sample ID: **LCSD-56415** Batch ID: **56415** TestNo: **M3500-Cr D** Units: **mg/L**
SampType: **LCSD** Run ID: **UV/VIS_2_130313A** Analysis Date: **3/13/2013 10:28:00 AM** Prep Date: **3/13/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.0976	0.0100	0.100	0	97.6	85	115	0.327	15	

Sample ID: **1303112-02D MS** Batch ID: **56415** TestNo: **M3500-Cr D** Units: **mg/L**
SampType: **MS** Run ID: **UV/VIS_2_130313A** Analysis Date: **3/13/2013 10:28:00 AM** Prep Date: **3/13/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.106	0.0100	0.100	0	106	85	115			

Sample ID: **1303112-02D MSD** Batch ID: **56415** TestNo: **M3500-Cr D** Units: **mg/L**
SampType: **MSD** Run ID: **UV/VIS_2_130313A** Analysis Date: **3/13/2013 10:28:00 AM** Prep Date: **3/13/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.100	0.0100	0.100	0	100	85	115	6.00	15	

Qualifiers:

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

CLIENT: Zia Engineering & Environmental
Work Order: 1303112
Project: HELSTF Chromium Spill Groundwater

ANALYTICAL QC SUMMARY REPORT

RunID: **UV/VIS_2_130313A**

Sample ID: **ICV-130313** Batch ID: **R65314** TestNo: **M3500-Cr D** Units: **mg/L**
SampType: **ICV** Run ID: **UV/VIS_2_130313A** Analysis Date: **3/13/2013 10:24:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.0971	0.0100	0.100	0	97.1	90	110			

Sample ID: **CCV-130313** Batch ID: **R65314** TestNo: **M3500-Cr D** Units: **mg/L**
SampType: **CCV** Run ID: **UV/VIS_2_130313A** Analysis Date: **3/13/2013 10:32:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.0100	0.200	0	98.0	90	110			

Qualifiers:

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

DHL Analytical, Inc.

25-Mar-13

Lab Order: 1303112
Client: Zia Engineering & Environmental
Project: HELSTF Chromium Spill Groundwater

Sequence Report

Run ID: GC15_130320A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV-130320	-----	M8015D	R65431	1	3/20/2013 9:46:36 AM		A
LCS-56459	-----	M8015D	56459	1	3/20/2013 9:55:36 AM	3/15/2013 12:45:29 PM	A
MB-56459	-----	M8015D	56459	1	3/20/2013 10:04:35 AM	3/15/2013 12:45:29 PM	A
1303112-01E	HLSF-0143-HMW-041-0313	M8015D	56459	1	3/20/2013 10:31:30 AM	3/15/2013 12:45:29 PM	A
1303112-02E	HLSF-0143-HMW-040-0313	M8015D	56459	1	3/20/2013 10:40:29 AM	3/15/2013 12:45:29 PM	A
CCV1-130320	-----	M8015D	R65431	1	3/20/2013 11:25:17 AM		A
1303141-01EMS	-----	M8015D	56459	1	3/20/2013 12:01:12 PM	3/15/2013 12:45:29 PM	A
1303141-01EMSD	-----	M8015D	56459	1	3/20/2013 12:10:11 PM	3/15/2013 12:45:29 PM	A
CCV2-130320	-----	M8015D	R65431	1	3/20/2013 12:19:10 PM		A

Run ID: GCMS7_130322A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV-130322	-----	SW8260C	R65454	1	3/22/2013 10:48:00 AM		A
LCS-56560	-----	SW8260C	56560	1	3/22/2013 11:13:00 AM	3/22/2013 10:33:37 AM	A
MB-56560	-----	SW8260C	56560	1	3/22/2013 12:01:00 PM	3/22/2013 10:33:37 AM	A
1303112-01A	HLSF-0143-HMW-041-0313	SW8260C	56560	1	3/22/2013 2:02:00 PM	3/22/2013 10:33:37 AM	A
1303112-02A	HLSF-0143-HMW-040-0313	SW8260C	56560	1	3/22/2013 2:26:00 PM	3/22/2013 10:33:37 AM	A
1303112-03A	Trip Blank	SW8260C	56560	1	3/22/2013 2:51:00 PM	3/22/2013 10:33:37 AM	T
1303141-01AMS	-----	SW8260C	56560	1	3/22/2013 8:30:00 PM	3/22/2013 10:33:37 AM	A
1303141-01AMSD	-----	SW8260C	56560	1	3/22/2013 8:54:00 PM	3/22/2013 10:33:37 AM	A

Lab Order: 1303112
Client: Zia Engineering & Environmental
Project: HELSTF Chromium Spill Groundwater

Sequence Report

Run ID: ICP-MS2_130320B

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
BLANK STD 1	-----	SW6020A	R65418	1	3/20/2013 9:33:00 AM		A
1 & 20ppb std 2	-----	SW6020A	R65418	1	3/20/2013 9:39:00 AM		A
10 & 200ppb std 3	-----	SW6020A	R65418	1	3/20/2013 9:45:00 AM		A
50 & 1000 std 4	-----	SW6020A	R65418	1	3/20/2013 9:51:00 AM		A
100 & 2000 std 5	-----	SW6020A	R65418	1	3/20/2013 9:57:00 AM		A
250 & 5000ppb std 6	-----	SW6020A	R65418	1	3/20/2013 10:03:00 AM		A
500 & 10000ppb std 7	-----	SW6020A	R65418	1	3/20/2013 10:09:00 AM		A
2000 ppb std 8	-----	SW6020A	R65418	1	3/20/2013 10:15:00 AM		A
ICSA-130320	-----	SW6020A	R65418	1	3/20/2013 10:32:00 AM		A
ICSAB-130320	-----	SW6020A	R65418	1	3/20/2013 10:38:00 AM		A
ICV1-130320	-----	SW6020A	R65418	1	3/20/2013 11:08:00 AM		A
ILCVL-130320	-----	SW6020A	R65418	1	3/20/2013 11:26:00 AM		A
ICB1-130320	-----	SW6020A	R65418	1	3/20/2013 11:32:00 AM		A
CCV1-130320	-----	SW6020A	R65418	1	3/20/2013 1:00:00 PM		A
LCVL1-130320	-----	SW6020A	R65418	1	3/20/2013 1:24:00 PM		A
CCB1-130320	-----	SW6020A	R65418	1	3/20/2013 1:36:00 PM		A
1303112-01C	HLSF-0143-HMW-041-0313	SW6020A	56469	1	3/20/2013 1:48:00 PM	3/18/2013 8:43:45 AM	A
1303112-02C	HLSF-0143-HMW-040-0313	SW6020A	56469	1	3/20/2013 1:54:00 PM	3/18/2013 8:43:45 AM	A
CCV2-130320	-----	SW6020A	R65418	1	3/20/2013 3:23:00 PM		A
LCVL2-130320	-----	SW6020A	R65418	1	3/20/2013 3:47:00 PM		A
CCB2-130320	-----	SW6020A	R65418	1	3/20/2013 4:05:00 PM		A

Lab Order: 1303112
Client: Zia Engineering & Environmental
Project: HELSTF Chromium Spill Groundwater

Sequence Report

Run ID: ICP-MS3_130319A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
1/20 ppb STD.	-----	SW6020A	R65396	1	3/19/2013 11:37:00 AM		A
10/200 ppb STD.	-----	SW6020A	R65396	1	3/19/2013 11:43:00 AM		A
50/1000 ppb STD.	-----	SW6020A	R65396	1	3/19/2013 11:49:00 AM		A
100/2000 ppb STD.	-----	SW6020A	R65396	1	3/19/2013 11:55:00 AM		A
250/5000 ppb STD.	-----	SW6020A	R65396	1	3/19/2013 12:01:00 PM		A
500/10000 ppb STD.	-----	SW6020A	R65396	1	3/19/2013 12:07:00 PM		A
2000/25000 ppb STD	-----	SW6020A	R65396	1	3/19/2013 12:13:00 PM		A
ICSA-130319	-----	SW6020A	R65396	1	3/19/2013 12:31:00 PM		A
ICSAB-130319	-----	SW6020A	R65396	1	3/19/2013 12:37:00 PM		A
BLANK STD 1	-----	SW6020A	R65396	1	3/19/2013 1:01:00 PM		A
ICV1-130319	-----	SW6020A	R65396	1	3/19/2013 1:07:00 PM		A
ILCVL-130319	-----	SW6020A	R65396	1	3/19/2013 1:19:00 PM		A
ICB1-130319	-----	SW6020A	R65396	1	3/19/2013 1:26:00 PM		A
MB-56469	-----	SW6020A	56469	1	3/19/2013 1:32:00 PM	3/18/2013 8:43:45 AM	A
LCS-56469	-----	SW6020A	56469	1	3/19/2013 1:38:00 PM	3/18/2013 8:43:45 AM	A
LCSD-56469	-----	SW6020A	56469	1	3/19/2013 1:44:00 PM	3/18/2013 8:43:45 AM	A
1303141-01C SD	-----	SW6020A	56469	5	3/19/2013 2:02:00 PM	3/18/2013 8:43:45 AM	A
1303112-01C	HLSF-0143-HMW-041-0313	SW6020A	56469	1	3/19/2013 2:20:00 PM	3/18/2013 8:43:45 AM	A
1303112-02C	HLSF-0143-HMW-040-0313	SW6020A	56469	1	3/19/2013 2:26:00 PM	3/18/2013 8:43:45 AM	A
1303141-01C PDS	-----	SW6020A	56469	1	3/19/2013 3:02:00 PM	3/18/2013 8:43:45 AM	A
1303141-01C MS	-----	SW6020A	56469	1	3/19/2013 3:08:00 PM	3/18/2013 8:43:45 AM	A
1303141-01C MSD	-----	SW6020A	56469	1	3/19/2013 3:14:00 PM	3/18/2013 8:43:45 AM	A
CCV1-130319	-----	SW6020A	R65396	1	3/19/2013 3:20:00 PM		A
LCVL1-130319	-----	SW6020A	R65396	1	3/19/2013 3:56:00 PM		A
CCB1-130319	-----	SW6020A	R65396	1	3/19/2013 4:08:00 PM		A

Run ID: TITRATOR_130313A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV3-130313	-----	M4500-H+ B	R65300	1	3/13/2013 9:37:00 AM	3/13/2013 9:37:00 AM	A
ICV2-130313	-----	M4500-H+ B	R65300	1	3/13/2013 9:39:00 AM	3/13/2013 9:39:00 AM	A
ICV-130313	-----	M4500-H+ B	R65300	1	3/13/2013 9:40:00 AM	3/13/2013 9:40:00 AM	A
1303102-01ADUP	-----	M4500-H+ B	56411	1	3/13/2013 9:44:00 AM	3/13/2013 9:00:00 AM	A
1303112-01D	HLSF-0143-HMW-041-0313	M4500-H+ B	56411	1	3/13/2013 9:48:00 AM	3/13/2013 9:00:00 AM	A
1303112-02D	HLSF-0143-HMW-040-0313	M4500-H+ B	56411	1	3/13/2013 9:51:00 AM	3/13/2013 9:00:00 AM	A
CCV1-130313	-----	M4500-H+ B	R65300	1	3/13/2013 9:52:00 AM	3/13/2013 9:52:00 AM	A

Lab Order: 1303112
Client: Zia Engineering & Environmental
Project: HELSTF Chromium Spill Groundwater

Sequence Report

Run ID: TOC_130318A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV-130318	-----	M5310C	R65373	1	3/18/2013 4:06:00 PM		A
MB-56471	-----	M5310C	56471	1	3/18/2013 4:24:00 PM	3/18/2013 9:20:00 AM	A
LCS-56471	-----	M5310C	56471	1	3/18/2013 4:43:00 PM	3/18/2013 9:20:00 AM	A
1303141-01BMS	-----	M5310C	56471	1	3/18/2013 5:23:00 PM	3/18/2013 9:20:00 AM	A
1303141-01BMSD	-----	M5310C	56471	1	3/18/2013 5:43:00 PM	3/18/2013 9:20:00 AM	A
1303112-01B	HLSF-0143-HMW-041-0313	M5310C	56471	1	3/18/2013 6:29:00 PM	3/18/2013 9:20:00 AM	A
1303112-02B	HLSF-0143-HMW-040-0313	M5310C	56471	1	3/18/2013 6:51:00 PM	3/18/2013 9:20:00 AM	A
CCV1-130318	-----	M5310C	R65373	1	3/18/2013 7:32:00 PM		A
CCV2-130318	-----	M5310C	R65373	1	3/18/2013 10:53:00 PM		A

Run ID: UV/VIS_2_130313A

Sample ID	Client Sample ID	Test Number	Batch ID	Dilution	Analysis Date	Prep Date	Matrix
ICV-130313	-----	M3500-Cr D	R65314	1	3/13/2013 10:24:00 AM		A
MB-56415	-----	M3500-Cr D	56415	1	3/13/2013 10:24:00 AM	3/13/2013 10:43:43 AM	A
LCS-56415	-----	M3500-Cr D	56415	1	3/13/2013 10:24:00 AM	3/13/2013 10:43:43 AM	A
LCSD-56415	-----	M3500-Cr D	56415	1	3/13/2013 10:28:00 AM	3/13/2013 10:43:43 AM	A
1303112-02D	HLSF-0143-HMW-040-0313	M3500-Cr D	56415	1	3/13/2013 10:28:00 AM	3/13/2013 10:43:43 AM	A
1303112-02D MS	HLSF-0143-HMW-040-0313MS	M3500-Cr D	56415	1	3/13/2013 10:28:00 AM	3/13/2013 10:43:43 AM	A
1303112-02D MSD	HLSF-0143-HMW-040-	M3500-Cr D	56415	1	3/13/2013 10:28:00 AM	3/13/2013 10:43:43 AM	A
1303112-01D	HLSF-0143-HMW-041-0313	M3500-Cr D	56415	1	3/13/2013 10:28:00 AM	3/13/2013 10:43:43 AM	A
CCV-130313	-----	M3500-Cr D	R65314	1	3/13/2013 10:32:00 AM		A