

# **Chain of Custody and Supporting Documentation**



# CHAIN OF CUSTODY RECORD

COC #: 235805

MWHAR20090820\_00  
Page: 1 of 1

Customer Information		Project Information				Project Information	
Site:	SSFL	Client Name:	Boeing		Collector:	A. Ruotolo	
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009		Contact #:		
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521		<b>Requested Analyses</b> Legend: Numerical values for analyses equate to turn around time in days H - Hold EH - Extract/Extrude & Hold Note: Values in the cells below are Turn Around Times.		
Address:	2121 N. California Blvd	Project Manager:	Alex Fischl				
	Suite 600	PM Phone #:	(925) 627-4627				
	Walnut Creek	Field Contact:					
	CA	Field Contact #:					
	94596	Lab Name:	GEL Laboratories, LLC				
Email:	sarah.vonraesfeld@mwhglobal.c	Lab Contact:	Jackie Trudell				
	sean.leffler@mwhglobal.com	Lab Address:	2040 Savage Road				
		Lab Phone:	Charleston, SC 29407				
			(843) 769-7388				
Sample Name	Matrix	Date	Time	No. of Containers	<b>Instructions/TAT</b> VOC by SW8260B - Water 10 VOC by SW8260B - Soil 10 TPH by SW8015BM - Water 10 TPH by SW8015BM - Soil 10 SVOCs by SW8270C SIM - Water 10 SVOCs by SW8270C SIM - Soil 10 Perchlorate 314 Water DI-WET 10 Perchlorate 314 Soil DI-WET 10 PCB by SW8082 - Water 10 PCB by SW8082 - Soil 10 Metals by 6010/6020/7471A - Soil 10 Metals by 6010/6020/7470A - Water 10 Energetics 8330 Water 10 Energetics 8330 Soil 10 D2216 Moisture Soil 10		
EBQW2234	Water	8/20/2009	14:00	13			
HZBS0173S001	Soil	8/20/2009	9:40	6			
HZBS0173S002	Soil	8/20/2009	9:57	6			
HZBS0174S001	Soil	8/20/2009	10:35	6			
HZBS0174S002	Soil	8/20/2009	10:56	6			
HZTB2003T001	Water	8/20/2009	8:49	3			

1. Relinquished by:		Date:	8-20-09	2. Received by:		Date:	8/21/09
<i>Sarah V. Raesfeld</i>				<i>Giff Kelly</i>			
Company:	MWH	Time:		Company:		Time:	0840
3. Relinquished by:		Date:		4. Received by:		Date:	
Comments:		<input type="checkbox"/> Geotracker EDF <input checked="" type="checkbox"/> Data Validation Package Level IV					

Client: <u>SSFL</u>		SDG/ARCOC/Work Order: <u>235805</u>	
Received By: <u>JP</u>		Date Received: <u>8/21/09</u>	
<b>Suspected Hazard Information</b>	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Counts Observed*: <u>30cpm</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken    damaged container    leaking container    other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	<input checked="" type="checkbox"/>			Preservation Method: <u>ice bags</u> blue ice    dry ice    none    other (describe) <u>5, 10, 15</u>
3	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4	Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken    damaged container    leaking container    other (describe)
5	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7	Are Encore containers present?	<input checked="" type="checkbox"/>			(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	<input checked="" type="checkbox"/>			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?			<input checked="" type="checkbox"/>	Sample ID's and containers affected: <u># 27B 20037001 labkd as Trip Blank</u>
10	Date & time on COC match date & time on bottles?			<input checked="" type="checkbox"/>	Sample ID's affected: <u>no time + date on trip blank</u>
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			

Comments: Fed Ex 9457 3161 5420  
" " 5410  
" " 5431

**Subject:** RE: SIRA Sample Receipt Issues - 8/21/09

**From:** Sarah Von Raesfeld <Sarah.E.VonRaesfeld@us.mwhglobal.com>

**Date:** Mon, 24 Aug 2009 13:11:02 -0600

**To:** Jackie Trudell <jacqueline.trudell@gel.com>, Sean Leffler <Sean.S.Leffler@us.mwhglobal.com>

Please log the samples in per the COC. The ID should be HZTB2003T001 and the collection date and time should be 8/20, 08:49.

-----Original Message-----

From: Jackie Trudell [mailto:[jacqueline.trudell@gel.com](mailto:jacqueline.trudell@gel.com)]

Sent: Friday, August 21, 2009 11:26 AM

To: Sean Leffler; Sarah Von Raesfeld

Subject: SIRA Sample Receipt Issues - 8/21/09

Sean and Sarah-

We encountered the following receipt issues:

- No containers were received for sample HZTB2003T001 (collected 8/20/09 at 0849)
- 3 vials were received labeled "Trip Blank" that are not marked on the COC
- Samples labeled "Trip Blank" have no date or time on container

Please advise.

Thanks,  
Jackie

--

Jacqueline Trudell  
Project Manager  
GEL Laboratories, LLC  
2040 Savage Road  
Charleston, SC (USA) 29407  
Direct: 843.769.7388  
Main: 843.556.8171 ext. 4406  
Fax: 843.766.1178  
E-mail: [jacqueline.trudell@gel.com](mailto:jacqueline.trudell@gel.com)  
Web: [www.gel.com](http://www.gel.com)

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## LABORATORY TASK ORDER (LTO) FORM

*INSTRUCTIONS: To be completed by Environmental Contractor & Emailed to Laboratory Project Manager, CH2M HILL (boeingdms@ch2m.com) & the Data Validator at Least 48 hrs prior to need for sample containers. Project Analytical Laboratory will confirm receipt via E-Mail.*

**Event Name:** ISRA Sampling, Feb 2009

**Start:** 2/19/2009

**End:** 2/23/2009

**LTO DATE:**

**LTO NUMBER:**

<p><b>Consultant Name:</b> MWH  <b>Address:</b> 2121 N. California Blvd. Ste. 600          Walnut Creek, CA 94596</p> <p><b>Contact Name:</b> Sarah Von Raesfeld  <b>Phone Number:</b> 925-627-4654  <b>Fax Number:</b> 925-627-4501  <b>E-mail Address:</b> <a href="mailto:Sarah.VonRaesfeld@mwhglobal.com">Sarah.VonRaesfeld@mwhglobal.com</a></p>	<p><b>Contract Laboratory:</b> GEL  <b>Address:</b> 2040 Savage Rd.          Charleston, SC 29407</p> <p><b>Lab Contact Name:</b> Cheryl Jones  <b>Phone Number:</b> 843-769-7388  <b>Fax Number:</b> 843-766-1178  <b>E-mail Address:</b> <a href="mailto:cj@gel.com">cj@gel.com</a></p>
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### SAMPLE CONTAINER ORDER FORM

<p><b>Date Required:</b> 02/19/09</p> <p><b>Date Sample Pickup:</b> NA</p> <p><b>Ship Containers To:</b>          Project Site <input checked="" type="checkbox"/> (enter "X")          Consultant Office <input type="checkbox"/> (enter "X")          Other Location (specify in comments) <input type="checkbox"/> (enter "X")</p> <p><b>Container Information:</b>          Trip Blank (VOA only) <input type="checkbox"/> Yes (Yes/No)          Temp Blank (VOA Only) <input type="checkbox"/> No (Yes/No)          DI Water Required? <input type="checkbox"/> No (Yes/No)          MS/MSD Extra Bottles? <input type="checkbox"/> No (Yes/No)</p> <p><b>Sample Matrix:</b>          Soil <input checked="" type="checkbox"/> (select all applicable)          Water <input checked="" type="checkbox"/> (select all applicable)          Vapor <input type="checkbox"/> (select all applicable)</p> <p>Est. Total # of Samples: 75      Est. Total # of EDDs: 5</p>	<p><b>Requested Analyses:</b> (Specify # of Samples)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Water</th> <th style="text-align: center;">Soil</th> <th style="text-align: center;">Contingent</th> </tr> </thead> <tbody> <tr> <td><b>Dioxins - (1613B)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">9</td> <td style="text-align: center;">14</td> </tr> <tr> <td>EPA 8015M (DRO)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8015M (JET FUEL)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8015M (CC)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8260B (VOC)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8270C SIM (SVOC)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8310 (PAH)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8082 (PCB)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>Acetone (8260B)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA TO-15 VOCs (SIM)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>Metals (6010B/6020/7470A/7471A)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td><b>Cadmium (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">15</td> <td style="text-align: center;">10</td> </tr> <tr> <td><b>Arsenic (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">5</td> <td style="text-align: center;">5</td> </tr> <tr> <td><b>% Moisture (D2216)</b></td> <td style="text-align: center;">0</td> <td style="text-align: center;">40</td> <td style="text-align: center;">30</td> </tr> <tr> <td><b>Lead (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">40</td> <td style="text-align: center;">30</td> </tr> <tr> <td><b>Copper (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">10</td> <td style="text-align: center;">5</td> </tr> <tr> <td><b>Zinc (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">10</td> <td style="text-align: center;">5</td> </tr> <tr> <td>EPA TO-14 (VOCs)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> </tbody> </table>		Water	Soil	Contingent	<b>Dioxins - (1613B)</b>	5	9	14	EPA 8015M (DRO)	--	--	--	EPA 8015M (JET FUEL)	--	--	--	EPA 8015M (CC)	--	--	--	EPA 8260B (VOC)	--	--	--	EPA 8270C SIM (SVOC)	--	--	--	EPA 8310 (PAH)	--	--	--	EPA 8082 (PCB)	--	--	--	Acetone (8260B)	--	--	--	EPA TO-15 VOCs (SIM)	--	--	--	Metals (6010B/6020/7470A/7471A)	--	--	--	<b>Cadmium (6020)</b>	5	15	10	<b>Arsenic (6020)</b>	5	5	5	<b>% Moisture (D2216)</b>	0	40	30	<b>Lead (6020)</b>	5	40	30	<b>Copper (6020)</b>	5	10	5	<b>Zinc (6020)</b>	5	10	5	EPA TO-14 (VOCs)	--	--	--
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EPA TO-14 (VOCs)	--	--	--																																																																										

### LABORATORY REPORTING REQUIREMENTS

<p><b>Project TAT:</b>          Normal: <input checked="" type="checkbox"/> (10 Business days)          RUSH: <input type="checkbox"/> (Specify- 24 / 48 / 72HRS)          Other: <input type="checkbox"/> (Specify # of Days)          Report Due Date: _____</p> <p><b>Special Reporting Requirements:</b>          Contingent Analysis? <input type="checkbox"/> No (Yes/No)          TIC (VOC) Required? <input type="checkbox"/> No (Yes/No)          TIC (SVOC) Required? <input type="checkbox"/> No (Yes/No)          Data Validation Pckge.: <input type="checkbox"/> Tier III ( Boeing Tier I, II or III)</p>	<p><b>Laboratory Results/Reports Deliverables:</b>          Draft Results Fax?: <input type="checkbox"/> (Yes/No)          Draft Results E-mail?: <input type="checkbox"/> Yes (Yes/No)          Specify Fax/E-mail Contact          Name, #, E-mail Address: <a href="mailto:Sarah.VonRaesfeld@mwhglobal.com">Sarah.VonRaesfeld@mwhglobal.com</a>          Send Original Reports To:          Project Site <input type="checkbox"/> (enter "X")          Consultant Office <input type="checkbox"/> (enter "X")          Other Location (specify in comments) <input checked="" type="checkbox"/> (enter "X")          # of Copies Reports Req.: <input type="checkbox"/> 1</p>
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### SPECIAL INSTRUCTIONS/LTO NOTES

### CONFIRMATION OF TRANSMITTAL & RECEIPT

<p><b>LTO Sent By:</b>          Name: Sean Leffler          Date: 02/20/09</p>	<p><b>LTO Received By:</b>          Name: _____          Date: _____</p>
--	--

## LABORATORY TASK ORDER (LTO) FORM (PAGE 2)

### ADDITIONAL REQUIRED ANALYSES

LTO DATE:

LTO NUMBER:

**Consultant Name:** MWH  
**Address:** 2121 N. California Blvd. Ste. 600  
Walnut Creek, CA 94596

**Contract Laboratory:** GEL  
**Address:** 2040 Savage Rd.  
Charleston, SC 29407

**Contact Name:** Sarah Von Raesfeld  
**Phone Number:** 925-627-4654  
**Fax Number:** 925-627-4501  
**E-mail Address:** [Sarah.VonRaesfeld@mwhglobal.com](mailto:Sarah.VonRaesfeld@mwhglobal.com)

**Lab Contact Name:** Cheryl Jones  
**Phone Number:** 843-769-7388  
**Fax Number:** 843-766-1178  
**E-mail Address:** [cj@gel.com](mailto:cj@gel.com)

### SAMPLE CONTAINER ORDER FORM (CONTINUED)

**Requested Analyses:** (Specify # of Samples)

	Water	Soil	Contingent
Arsenic (6020)	--	--	--
Lead (6020)	--	--	--
Cadmium (6020)	--	--	--
Lithium (6020)	--	--	--
Sodium (6020)	--	--	--
Selenium (6020)	--	--	--
Thallium (6020)	--	--	--
Zinc (6020)	--	--	--
Boron (6010B)	--	--	--
Vanadium (6010B)	--	--	--
Copper (6020)	--	--	--
Zirconium (6020)	--	--	--

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# **Case Narrative**

**Case Narrative  
for  
Boeing - SSFL (MWH)  
Work Order: 235805  
SDG: 235805**

**September 03, 2009**

**Laboratory Identification:**

GEL Laboratories LLC  
2040 Savage Road  
Charleston, South Carolina 29407  
(843) 556-8171

**Summary:**

**Sample Receipt**

The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on August 21, 2009 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

The laboratory received the following samples:

<b><u>Laboratory Identification</u></b>	<b><u>Sample Description</u></b>
235805001	EBQW2234
235805002	HZBS0173S001
235805003	HZBS0173S002
235805004	HZBS0174S001
235805005	HZBS0174S002
235805006	HZTB2003T001

**Items of Note**

Santa Susanna Field Laboratory Technical Representative was contacted seeking resolution to any analytical and/or receipt issues. Please see the enclosed e-mails.

**Case Narrative**

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

**Data Package:**

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Explosives by LCMSMS, FID Flame Ionization Detector, GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, HPLC Explosive, Metals and Percent Moisture.

I certify that this data package is in compliance with the terms and conditions of the subcontract and task order, both technically and for the completeness, for other than the conditions detailed in the attached case narratives.

A handwritten signature in black ink that reads "Jacqueline A. Trudell". The signature is written in a cursive style with a large initial 'J' and 'T'.

Jacqueline Trudell

Project Manager

# **Data Qualifiers Definitions**

## Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

# **Laboratory Certifications**

**List of current GEL Certifications as of 02 September 2009**

<b>State</b>	<b>Certification</b>
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641



# DATA VALIDATION REPORT

Boeing SSFL RFI ISRA

SAMPLE DELIVERY GROUP: 235805

Prepared by

MEC<sup>X</sup>, LP  
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Aurora, CO 80014

**I. INTRODUCTION**

Task Order Title: Boeing SSFL RFI ISRA  
 Contract Task Order: 1261.500D.00  
 Sample Delivery Group: 235805  
 Project Manager: Dixie Hambrick  
 Matrix: water/soil  
 QC Level: V  
 No. of Samples: 6  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: GEL

**Table 1. Sample Identification**

<b>Sample Name</b>	<b>Lab Sample Name</b>	<b>Sub-Lab Sample Name</b>	<b>Matrix</b>	<b>Collection</b>	<b>Method</b>
EBQW2234	235805001	N/A	Water	8/20/2009 2:00:00 PM	314.0, 6010B, 6020, 7470A, 8015B, 8082, 8260B, 8270C, 8321A, 8330
HZBS0173S001	235805002	N/A	Soil	8/20/2009 9:40:00 AM	314.0-DI WET, 6010B, 6020, 7471A, 8015B, 8082, 8260B, 8270C, 8321A, 8330
HZBS0173S002	235805003	N/A	Soil	8/20/2009 9:57:00 AM	314.0-DI WET, 6010B, 6020, 7471A, 8015B, 8082, 8260B, 8270C, 8321A, 8330
HZBS0174S001	235805004	N/A	Soil	8/20/2009 10:35:00 AM	314.0-DI WET, 6010B, 6020, 7471A, 8015B, 8082, 8260B, 8270C, 8321A, 8330
HZBS0174S002	235805005	N/A	Soil	8/20/2009 10:56:00 AM	314.0-DI WET, 6010B, 6020, 7471A, 8015B, 8082, 8260B, 8270C, 8321A, 8330
HZTB2003T001	235805006	N/A	Water	8/20/2009 8:49:00 AM	8260B

**II. Sample Management**

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.

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**Data Qualifier Reference Table**

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Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
T-I	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents a compound with a CAS number and fit greater than 80%.	Not applicable

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T-II	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents a class of compound but not of sufficient identification quality to represent a specific compound.	Not applicable
T-III	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents an unknown compound.	Not applicable
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

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### Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

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**Qualification Code Reference Table Cont.**

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

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### III. Method Analyses

#### A. EPA METHOD 8330—Energetics

Reviewed By: P. Meeks

Date Reviewed: September 9, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Explosives, Nitroaromatics, and Nitramines (DVP-16, Rev. 0)*, *EPA Method 8330*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: HMX was recovered below the control limit in both the aqueous LCS and LCSD; therefore, nondetected HMX in EBQW2234 was qualified as estimated, "UJ." All remaining recoveries and all RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on ILBS0173S001. All recoveries and all RPDs were within laboratory-established QC limits
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: FBQW2235 (233444) was the field blank and EBQW2234 was the equipment rinsate associated with the soil samples in this SDG. FBQW2235 was not analyzed for energetics and EBQW2234 had no detects above the MDL.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for energetic compounds by Method 8330.

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. All samples were analyzed at a 2x dilution as per the laboratory's standard operating procedure. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

## **B. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury**

Reviewed By: P. Meeks

Date Reviewed: September 9, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Antimony, copper, and vanadium were reported in the aqueous method blank at -3.27, -0.352, and -3.02 µg/L, respectively; therefore, these nondetected analytes were qualified as estimated, "UJ," in EBQW2234. Mercury was reported in the soil method blank at -0.00533 mg/kg; therefore, the soil mercury results were qualified as estimated, "J," for detects and, "UJ," for nondetects. Boron was reported in a bracketing CCB at -14.45 µg/L; therefore, nondetected boron in the soil samples was qualified as estimated, "UJ." Method blanks and CCBs had no detects.
- Interference Check Samples: Review is not applicable at a Level V validation; however, the reviewer noted that boron and antimony were reported in the ICSEA at -23.8 and -8.6 µg/L, respectively. The soil boron and antimony results were qualified as estimated, "J," for detects and, "UJ," for nondetects.
- Blank Spikes and Laboratory Control Samples: Recoveries and the aqueous RPDs were within laboratory-established QC limits.
- Laboratory Duplicates: Laboratory duplicate analyses were performed on HZBS0173S001. All RPDs were within the laboratory-established control limit.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZBS0173S001. Recoveries and RPDs were within laboratory-established QC limits.

- **Serial Dilution:** Serial dilution analyses were performed on HZBS0173S001 and EBQW2234. For HZBS0173S001, the copper %D exceeded the control limit; therefore, copper detected in the soil samples was qualified as estimated, "J." All remaining %Ds were within the laboratory-established control limit.
- **Internal Standards Performance:** Review is not applicable at a Level V validation.
- **Sample Result Verification:** Review is not applicable at a Level V validation. As the samples in this SDG were validated at Level V, the QC information necessary to make an absolute determination of bias in the samples was not reviewed; therefore, when qualifications were applied, no bias was assigned. Several ICP-MS analytes in all soil samples were reported from 10× dilutions due to matrix interference or in order to report the analyte within the linear range of the calibration. All remaining soil ICP-MS analytes were reported from the laboratory's standard 2× dilution. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the MDL.
- **Field QC Samples:** Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - **Field Blanks and Equipment Rinsates:** FBQW2235 (233444) was the field blank and EBQW2234 was the equipment rinsate associated with the soil samples in this SDG. Thallium was detected in EBQW2234 at 0.531 µg/L; therefore, thallium detected in the soil samples was qualified as nondetected, "U," at the level of interference if detected above the RL or at the RL if detected below. There were no other detects in the field QC samples.
  - **Field Duplicates:** There were no field duplicate samples identified for this SDG.

### **C. EPA METHOD 8270C-SIM—Polynuclear Aromatic Hydrocarbons (PAHs)**

Reviewed By: P. Meeks

Date Reviewed: September 9, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- **Holding Times:** Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.
- **GC/MS Tuning:** Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.
- Blanks: Di-n-butyl phthalate and bis(2-ethylhexyl)phthalate were detected in the water and soil method blanks at 0.323 and 0.344 µg/L and 7.09 and 8.32 mg/kg, respectively; therefore, any detects for these compounds present at less than 10x the method blank concentrations were qualified as nondetected, "U," at the reporting limits. The method blanks had no other target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and the aqueous RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZBS0173S001. Recoveries and RPDs were within laboratory-established QC limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: FBQW2235 (233444) was the field blank and EBQW2234 was the equipment rinsate associated with the soil samples in this SDG. FBQW2235 was not analyzed for PAHs and there were no reportable detects above the MDL in EBQW2234.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for PAH compounds and added phthalates by Method 8270C low-level.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. HZBS0173S001 was analyzed at a 4x dilution due to the presence of nontarget compounds. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System performance: System performance is not evaluated at a Level V validation.

## D. EPA METHOD 314.0—Perchlorate

Reviewed By: P. Meeks

Date Reviewed: September 9, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Metals (DVP-20, Rev. 0)*, *EPA Method 314.0*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: The analytical holding time, 28 days, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the method-established QC limits of 85-115%.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on HZBS0173S001. The RPD was within the method-established control limit of  $\leq 15\%$ .
- Matrix Spike/Matrix Spike Duplicate: A matrix spike analysis was performed on HZBS0173S001. The recovery was within method-established QC limits of 80-120%.
- Sample Result Verification: The sample results reported on the sample summary forms were verified against the raw data. No transcription errors or calculation errors were noted. HZBS0173S002 was reported from a 10x dilution due to matrix interference. Any detect between the MDL and the RL was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: FBQW2235 (233444) was the field blank and EBQW2234 was the equipment rinsate associated with the soil samples in this SDG. FBQW2235 was not analyzed for perchlorate and perchlorate was not detected in EBQW2234.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

## E. EPA METHOD 8082—PCBs

Reviewed By: P. Meeks

Date Reviewed: September 9, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0)*, *EPA Method 8082*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Extraction and analytical holding times were met for soils. EBQW2234 was extracted one day beyond the holding time; therefore, the results (all nondetects) in EBQW2234 were qualified as estimated, "UJ." The soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Surrogates in samples analyzed at 10x or greater dilutions are considered diluted out and were not evaluated. Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZBS0173S001. Recoveries and RPDs were within laboratory-established QC limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: FBQW2235 (233444) was the field blank and EBQW2234 was the equipment rinsate associated with the soil samples in this SDG. FBQW2235 was not analyzed for PCBs and there were no detects above the MDL in EBQW2234.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for Aroclors by Method 8082.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Although not routinely evaluated, the reviewer noted that the intercolumn %Ds for Aroclor 1248 and Aroclor 1260 in HZBS0174S002 exceeded 40%.

Both results were qualified as estimated, "J." HZBS0174S002 was reported from a 10x dilution in order to report target analytes within the linear range of the calibration. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

## F. EPA METHOD 8015B—Extractable Total Fuel Hydrocarbons (EFHs)

Reviewed By: P. Meeks

Date Reviewed: September 9, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Total Fuel Hydrocarbons (DVP-8, Rev. 0)*, *EPA Method 8015B*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: All recoveries and the aqueous RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZBS0174S001. Both recoveries were acceptable; however, the RPD exceeded the control limit.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: FBQW2235 (233444) was the field blank and EBQW2234 was the equipment rinsate associated with the soil samples in this SDG. There were no detects above the MDL in either sample.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. Four EFH hydrocarbon ranges were reported: C8-C11, C12-C14, C15-C20, and C21-C30.

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. HZBS0173S002 was analyzed at a 5x dilution due to a thick and oily extract. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

## G. EPA METHOD 8260B—Volatile Organic Compounds (VOCs)

Reviewed By: P. Meeks

Date Reviewed: September 9, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 8260B*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Analytical holding times were met. The unpreserved aqueous samples and the frozen Encore samples were analyzed within seven days of collection.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and the soil RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a sample from this SDG. Evaluation of method accuracy and precision was based on the blank spike results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Trip Blanks: HZTB2003T001 had no detects above the MDL.
  - Field Blanks and Equipment Rinsates: FBQW2235 (233444) was the field blank and EBQW2234 was the equipment rinsate associated with the soil samples in this SDG. FBQW2235 was not analyzed for volatiles. Chlorobenzene was detected in EBQW2234 at 0.353 µg/L, but was not detected in the site soil samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for volatile target compounds by Method 8260B.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System Performance: Review is not applicable at a Level V validation.

# Validated Sample Result Forms: 235805

*Analysis Method*    314.0-DI WET

**Sample Name**    EBQW2234                      **Matrix Type:** Water                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805001                      **Sample Date:** 8/20/2009 2:00:00 PM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797730	4	4		1 ug/L	U	U	

**Sample Name**    HZBS0173S001                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805002                      **Sample Date:** 8/20/2009 9:40:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797730	4	4		1 ug/L	U	U	

**Sample Name**    HZBS0173S002                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805003                      **Sample Date:** 8/20/2009 9:57:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797730	40	40		10 ug/L	U	U	

**Sample Name**    HZBS0174S001                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805004                      **Sample Date:** 8/20/2009 10:35:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797730	4	4		1 ug/L	U	U	

**Sample Name**    HZBS0174S002                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805005                      **Sample Date:** 8/20/2009 10:56:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797730	4	4		1 ug/L	U	U	

Analysis Method 6010B

**Sample Name** EBQW2234 **Matrix Type:** Water **Result Type:** Primary Result  
**Lab Sample Name:** 235805001 **Sample Date:** 8/20/2009 2:00:00 PM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429905	68	200		68 ug/L	U	U	
Antimony	7440360	3	10		3 ug/L	U	UJ	B
Boron	7440428	15	50		15 ug/L	U	U	

**Sample Name** HZBS0173S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805002 **Sample Date:** 8/20/2009 9:40:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429905	8910	20.4		6.93 mg/kg			
Antimony	7440360	0.501	1.02		0.337 mg/kg	J	J	I
Boron	7440428	1.02	5.1		1.02 mg/kg	U	UJ	B, I

**Sample Name** HZBS0173S002 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805003 **Sample Date:** 8/20/2009 9:57:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429905	6180	21.3		7.24 mg/kg			
Antimony	7440360	0.352	1.07		0.352 mg/kg	U	UJ	I
Boron	7440428	1.07	5.33		1.07 mg/kg	U	UJ	B, I

**Sample Name** HZBS0174S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805004 **Sample Date:** 8/20/2009 10:35:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429905	8500	20.7		7.04 mg/kg			
Antimony	7440360	0.342	1.04		0.342 mg/kg	U	UJ	I
Boron	7440428	1.04	5.18		1.04 mg/kg	U	UJ	B, I

**Sample Name** HZBS0174S002 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805005 **Sample Date:** 8/20/2009 10:56:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429905	9680	20.8		7.07 mg/kg			
Antimony	7440360	0.343	1.04		0.343 mg/kg	U	UJ	I
Boron	7440428	1.04	5.2		1.04 mg/kg	U	UJ	B, I

*Analysis Method*    6020

**Sample Name**    EBQW2234                      **Matrix Type:** Water                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805001                      **Sample Date:** 8/20/2009 2:00:00 PM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	7440382	1.6	5		1.6 ug/L	U	U	
Barium	7440393	0.6	2		0.6 ug/L	U	U	
Beryllium	7440417	0.1	0.5		0.1 ug/L	U	U	
Cadmium	7440439	0.11	1		0.11 ug/L	U	U	
Chromium	7440473	2	10		2 ug/L	U	U	
Cobalt	7440484	0.1	1		0.1 ug/L	U	U	
Copper	7440508	0.33	1		0.33 ug/L	U	UJ	B
Lead	7439921	0.5	2		0.5 ug/L	U	U	
Molybdenum	7439987	0.167	0.5		0.167 ug/L	U	U	
Nickel	7440020	0.5	2		0.5 ug/L	U	U	
Selenium	7782492	1	5		1 ug/L	U	U	
Silver	7440224	0.2	1		0.2 ug/L	U	U	
Thallium	7440280	0.531	1		0.3 ug/L	J	J	
Vanadium	7440622	3	10		3 ug/L	U	UJ	B
Zinc	7440666	3	10		3 ug/L	U	U	

*Analysis Method*    6020

**Sample Name**    HZBS0173S001                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805002                      **Sample Date:** 8/20/2009 9:40:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	7440382	4.43	1.03	0.206	mg/kg			
Barium	7440393	70.7	2.06	0.514	mg/kg			
Beryllium	7440417	0.593	0.103	0.0206	mg/kg			
Cadmium	7440439	0.315	0.206	0.0206	mg/kg			
Chromium	7440473	16	3.08	1.03	mg/kg			
Cobalt	7440484	4.82	1.03	0.308	mg/kg			
Copper	7440508	8.09	0.198	0.0655	mg/kg	E	J	A
Lead	7439921	10.9	0.411	0.103	mg/kg			
Molybdenum	7439987	0.453	0.206	0.0617	mg/kg			
Nickel	7440020	9.62	2.06	0.514	mg/kg			
Selenium	7782492	0.514	1.03	0.514	mg/kg	U	U	
Silver	7440224	0.0966	0.206	0.0411	mg/kg	J	J	
Thallium	7440280	0.25	0.25	0.25	mg/kg		U	F, RL changed from 0.206 and MDL from 0.0617
Vanadium	7440622	26.1	10.3	2.06	mg/kg			
Zinc	7440666	54.3	10.3	2.06	mg/kg			

*Analysis Method*    6020

**Sample Name**    HZBS0173S002                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805003                      **Sample Date:** 8/20/2009 9:57:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	7440382	2.89	1.03	0.206	mg/kg			
Barium	7440393	63.8	2.06	0.516	mg/kg			
Beryllium	7440417	0.506	0.103	0.0206	mg/kg			
Cadmium	7440439	0.22	0.206	0.0206	mg/kg			
Chromium	7440473	13.9	3.1	1.03	mg/kg			
Cobalt	7440484	3.8	1.03	0.31	mg/kg			
Copper	7440508	7.75	0.21	0.0693	mg/kg	E	J	A
Lead	7439921	8.32	0.413	0.103	mg/kg			
Molybdenum	7439987	0.313	0.206	0.0619	mg/kg			
Nickel	7440020	7.65	2.06	0.516	mg/kg			
Selenium	7782492	0.516	1.03	0.516	mg/kg	U	U	
Silver	7440224	0.0801	0.206	0.0413	mg/kg	J	J	
Thallium	7440280	0.22	0.22	0.22	mg/kg		U	F, RL changed from 0.206 and MDL from 0.0619
Vanadium	7440622	22.9	10.3	2.06	mg/kg			
Zinc	7440666	43.3	10.3	2.06	mg/kg			

*Analysis Method*    6020

**Sample Name**    HZBS0174S001                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805004                      **Sample Date:** 8/20/2009 10:35:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	7440382	3.56	1.05	0.209	mg/kg			
Barium	7440393	67.4	2.09	0.523	mg/kg			
Beryllium	7440417	0.599	0.105	0.0209	mg/kg			
Cadmium	7440439	0.185	0.209	0.0209	mg/kg	J	J	
Chromium	7440473	18.6	3.14	1.05	mg/kg			
Cobalt	7440484	4.39	1.05	0.314	mg/kg			
Copper	7440508	5.29	0.205	0.0676	mg/kg	E	J	A
Lead	7439921	9.9	0.419	0.105	mg/kg			
Molybdenum	7439987	0.378	0.209	0.0628	mg/kg			
Nickel	7440020	13.2	2.09	0.523	mg/kg			
Selenium	7782492	0.523	1.05	0.523	mg/kg	U	U	
Silver	7440224	0.0544	0.209	0.0419	mg/kg	J	J	
Thallium	7440280	0.217	0.217	0.217	mg/kg		U	F, RL changed from 0.209 and MDL from 0.0628
Vanadium	7440622	25.7	10.5	2.09	mg/kg			
Zinc	7440666	44.7	10.5	2.09	mg/kg			

*Analysis Method 6020*

<b>Sample Name</b>		HZBS0174S002		<b>Matrix Type:</b>		Soil		<b>Result Type:</b>		Primary Result	
<b>Lab Sample Name:</b>		235805005		<b>Sample Date:</b>		8/20/2009 10:56:00 AM		<b>Validation Level:</b>		V	
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>			
Arsenic	7440382	2.47	1.05	0.21	mg/kg						
Barium	7440393	40.3	2.1	0.525	mg/kg						
Beryllium	7440417	0.489	0.105	0.021	mg/kg						
Cadmium	7440439	0.0962	0.21	0.021	mg/kg	J	J				
Chromium	7440473	16	3.15	1.05	mg/kg						
Cobalt	7440484	3.12	1.05	0.315	mg/kg						
Copper	7440508	3.87	0.203	0.0671	mg/kg	E	J	A			
Lead	7439921	4.48	0.42	0.105	mg/kg						
Molybdenum	7439987	0.174	0.21	0.063	mg/kg	J	J				
Nickel	7440020	6.15	2.1	0.525	mg/kg						
Selenium	7782492	0.525	1.05	0.525	mg/kg	U	U				
Silver	7440224	0.042	0.21	0.042	mg/kg	U	U				
Thallium	7440280	0.21	0.21	0.21	mg/kg	J	U	F, result changed from 0.175 and MDL from 0.063			
Vanadium	7440622	24.5	10.5	2.1	mg/kg						
Zinc	7440666	34.5	10.5	2.1	mg/kg						

*Analysis Method 7470A*

<b>Sample Name</b>		EBQW2234		<b>Matrix Type:</b>		Water		<b>Result Type:</b>		Primary Result	
<b>Lab Sample Name:</b>		235805001		<b>Sample Date:</b>		8/20/2009 2:00:00 PM		<b>Validation Level:</b>		V	
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>			
Mercury	7439976	0.066	0.2	0.066	ug/L	U	U				

*Analysis Method*    7471A

<b>Sample Name</b>	HZBS0173S001	<b>Matrix Type:</b> Soil			<b>Result Type:</b> Primary Result			
<b>Lab Sample Name:</b>	235805002	<b>Sample Date:</b> 8/20/2009 9:40:00 AM			<b>Validation Level:</b> V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Mercury	7439976	0.0172	0.0121	0.0041	mg/kg		<b>J</b>	<b>B</b>
<b>Sample Name</b>	HZBS0173S002	<b>Matrix Type:</b> Soil			<b>Result Type:</b> Primary Result			
<b>Lab Sample Name:</b>	235805003	<b>Sample Date:</b> 8/20/2009 9:57:00 AM			<b>Validation Level:</b> V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Mercury	7439976	0.0135	0.0123	0.00417	mg/kg		<b>J</b>	<b>B</b>
<b>Sample Name</b>	HZBS0174S001	<b>Matrix Type:</b> Soil			<b>Result Type:</b> Primary Result			
<b>Lab Sample Name:</b>	235805004	<b>Sample Date:</b> 8/20/2009 10:35:00 AM			<b>Validation Level:</b> V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Mercury	7439976	0.0112	0.0109	0.00369	mg/kg		<b>J</b>	<b>B</b>
<b>Sample Name</b>	HZBS0174S002	<b>Matrix Type:</b> Soil			<b>Result Type:</b> Primary Result			
<b>Lab Sample Name:</b>	235805005	<b>Sample Date:</b> 8/20/2009 10:56:00 AM			<b>Validation Level:</b> V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Mercury	7439976	0.00368	0.0108	0.00368	mg/kg	U	<b>UJ</b>	<b>B</b>

Analysis Method 8015B

**Sample Name** EBQW2234 **Matrix Type:** Water **Result Type:** Primary Result  
**Lab Sample Name:** 235805001 **Sample Date:** 8/20/2009 2:00:00 PM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
EFH (C12 - C14)	EFHD (C12)	97.1	97.1		32 ug/L	U	U	
EFH (C15 - C20)	EFHD (C15)	97.1	97.1		32 ug/L	U	U	
EFH (C21 - C30)	EFHD (C21)	97.1	97.1		32 ug/L	U	U	
EFH (C8 - C11)	EFHD (C8-	97.1	97.1		32 ug/L	U	U	

**Sample Name** HZBS0173S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805002 **Sample Date:** 8/20/2009 9:40:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
EFH (C12 - C14)	EFHD (C12)	3.43	3.43		1.13 mg/kg	U	U	
EFH (C15 - C20)	EFHD (C15)	1.87	3.43		1.13 mg/kg	J	J	
EFH (C21 - C30)	EFHD (C21)	21.8	3.43		1.13 mg/kg			
EFH (C8 - C11)	EFHD (C8-	3.43	3.43		1.13 mg/kg	U	U	

**Sample Name** HZBS0173S002 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805003 **Sample Date:** 8/20/2009 9:57:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
EFH (C12 - C14)	EFHD (C12)	17.7	17.7		5.86 mg/kg	U	U	
EFH (C15 - C20)	EFHD (C15)	17.7	17.7		5.86 mg/kg	U	U	
EFH (C21 - C30)	EFHD (C21)	128	17.7		5.86 mg/kg			
EFH (C8 - C11)	EFHD (C8-	17.7	17.7		5.86 mg/kg	U	U	

**Sample Name** HZBS0174S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805004 **Sample Date:** 8/20/2009 10:35:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
EFH (C12 - C14)	EFHD (C12)	3.49	3.49		1.15 mg/kg	U	U	
EFH (C15 - C20)	EFHD (C15)	1.29	3.49		1.15 mg/kg	J	J	
EFH (C21 - C30)	EFHD (C21)	8.08	3.49		1.15 mg/kg			
EFH (C8 - C11)	EFHD (C8-	3.49	3.49		1.15 mg/kg	U	U	

*Analysis Method*    8015B

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**Sample Name**    HZBS0174S002                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805005                      **Sample Date:** 8/20/2009 10:56:00 AM                      **Validation Level:** V

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<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
EFH (C12 - C14)	EFHD (C12)	3.5	3.5		1.16 mg/kg	U	<b>U</b>	
EFH (C15 - C20)	EFHD (C15)	3.5	3.5		1.16 mg/kg	U	<b>U</b>	
EFH (C21 - C30)	EFHD (C21)	1.44	3.5		1.16 mg/kg	J	<b>J</b>	
EFH (C8 - C11)	EFHD (C8-	3.5	3.5		1.16 mg/kg	U	<b>U</b>	

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*Analysis Method*    8082

**Sample Name**      EBQW2234                      **Matrix Type:** Water                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805001                      **Sample Date:** 8/20/2009 2:00:00 PM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016	12674112	0.0971	0.0971	0.0323	ug/L	U	UJ	H
Aroclor-1221	11104282	0.0971	0.0971	0.0323	ug/L	U	UJ	H
Aroclor-1232	11141165	0.0971	0.0971	0.0323	ug/L	U	UJ	H
Aroclor-1242	53469219	0.0971	0.0971	0.0323	ug/L	U	UJ	H
Aroclor-1248	12672296	0.0971	0.0971	0.0323	ug/L	U	UJ	H
Aroclor-1254	11097691	0.0971	0.0971	0.0323	ug/L	U	UJ	H
Aroclor-1260	11096825	0.0971	0.0971	0.0323	ug/L	U	UJ	H

**Sample Name**      HZBS0173S001                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805002                      **Sample Date:** 8/20/2009 9:40:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016	12674112	3.42	3.42	1.14	ug/kg	U	U	
Aroclor-1221	11104282	3.42	3.42	1.14	ug/kg	U	U	
Aroclor-1232	11141165	3.42	3.42	1.14	ug/kg	U	U	
Aroclor-1242	53469219	3.42	3.42	1.14	ug/kg	U	U	
Aroclor-1248	12672296	3.42	3.42	1.14	ug/kg	U	U	
Aroclor-1254	11097691	4.9	3.42	1.14	ug/kg			
Aroclor-1260	11096825	4.3	3.42	1.14	ug/kg			

**Sample Name**      HZBS0173S002                      **Matrix Type:** Soil                      **Result Type:** Primary Result  
**Lab Sample Name:**    235805003                      **Sample Date:** 8/20/2009 9:57:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016	12674112	3.54	3.54	1.18	ug/kg	U	U	
Aroclor-1221	11104282	3.54	3.54	1.18	ug/kg	U	U	
Aroclor-1232	11141165	3.54	3.54	1.18	ug/kg	U	U	
Aroclor-1242	53469219	3.54	3.54	1.18	ug/kg	U	U	
Aroclor-1248	12672296	3.54	3.54	1.18	ug/kg	U	U	
Aroclor-1254	11097691	3.54	3.54	1.18	ug/kg	U	U	
Aroclor-1260	11096825	3.54	3.54	1.18	ug/kg	U	U	

Analysis Method 8082

Sample Name		HZBS0174S001		Matrix Type:		Soil		Result Type:		Primary Result	
Lab Sample Name:		235805004		Sample Date:		8/20/2009 10:35:00 AM		Validation Level:		V	
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes			
Aroclor-1016	12674112	3.49	3.49		1.16 ug/kg	U	U				
Aroclor-1221	11104282	3.49	3.49		1.16 ug/kg	U	U				
Aroclor-1232	11141165	3.49	3.49		1.16 ug/kg	U	U				
Aroclor-1242	53469219	3.49	3.49		1.16 ug/kg	U	U				
Aroclor-1248	12672296	3.49	3.49		1.16 ug/kg	U	U				
Aroclor-1254	11097691	1.7	3.49		1.16 ug/kg	J	J				
Aroclor-1260	11096825	1.7	3.49		1.16 ug/kg	J	J				

Sample Name		HZBS0174S002		Matrix Type:		Soil		Result Type:		Primary Result	
Lab Sample Name:		235805005		Sample Date:		8/20/2009 10:56:00 AM		Validation Level:		V	
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes			
Aroclor-1016	12674112	34.9	34.9		11.6 ug/kg	U	U				
Aroclor-1221	11104282	34.9	34.9		11.6 ug/kg	U	U				
Aroclor-1232	11141165	34.9	34.9		11.6 ug/kg	U	U				
Aroclor-1242	53469219	34.9	34.9		11.6 ug/kg	U	U				
Aroclor-1248	12672296	274	34.9		11.6 ug/kg	P	J	*III			
Aroclor-1254	11097691	222	34.9		11.6 ug/kg						
Aroclor-1260	11096825	91.5	34.9		11.6 ug/kg	P	J	*III			

# Analysis Method 8260B

**Sample Name** EBQW2234 **Matrix Type:** Water **Result Type:** Primary Result  
**Lab Sample Name:** 235805001 **Sample Date:** 8/20/2009 2:00:00 PM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1	1	0.3 ug/L	U	U		
1,1,1-Trichloroethane	71556	1	1	0.325 ug/L	U	U		
1,1,2,2-Tetrachloroethane	79345	1	1	0.25 ug/L	U	U		
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	5	5	1 ug/L	U	U		
1,1,2-Trichloroethane	79005	1	1	0.25 ug/L	U	U		
1,1-Dichloroethane	75343	1	1	0.3 ug/L	U	U		
1,1-Dichloroethene	75354	1	1	0.3 ug/L	U	U		
1,1-Dichloropropene	563586	1	1	0.25 ug/L	U	U		
1,2,3-Trichlorobenzene	87616	1	1	0.332 ug/L	U	U		
1,2,3-Trichloropropane	96184	1	1	0.3 ug/L	U	U		
1,2,4-Trichlorobenzene	120821	1	1	0.3 ug/L	U	U		
1,2,4-Trimethylbenzene	95636	1	1	0.25 ug/L	U	U		
1,2-Dibromo-3-chloropropane	96128	1	1	0.3 ug/L	U	U		
1,2-Dibromoethane (EDB)	106934	1	1	0.25 ug/L	U	U		
1,2-Dichlorobenzene	95501	1	1	0.25 ug/L	U	U		
1,2-Dichloroethane	107062	1	1	0.25 ug/L	U	U		
1,2-Dichloropropane	78875	1	1	0.25 ug/L	U	U		
1,3,5-Trimethylbenzene	108678	1	1	0.25 ug/L	U	U		
1,3-Dichlorobenzene	541731	1	1	0.25 ug/L	U	U		
1,3-Dichloropropane	142289	1	1	0.3 ug/L	U	U		
1,4-Dichlorobenzene	106467	1	1	0.25 ug/L	U	U		
2,2-dichloropropane	594207	1	1	0.3 ug/L	U	U		
2-Butanone (MEK)	78933	5	5	1.25 ug/L	U	U		
2-Chloro-1,1,1-trifluoroethane	75887	10	10	3 ug/L	U	U		
2-Chloroethyl vinyl ether	110758	5	5	1.5 ug/L	U	U		
2-Chlorotoluene	95498	1	1	0.25 ug/L	U	U		
2-Hexanone	591786	5	5	1.25 ug/L	U	U		
4-Chlorotoluene	106434	1	1	0.25 ug/L	U	U		
4-Methyl-2-pentanone (MIBK)	108101	5	5	1.25 ug/L	U	U		
Acetone	67641	5	5	1.5 ug/L	U	U		
Benzene	71432	1	1	0.3 ug/L	U	U		
Bromobenzene	108861	1	1	0.25 ug/L	U	U		
Bromochloromethane	74975	1	1	0.3 ug/L	U	U		
Bromodichloromethane	75274	1	1	0.25 ug/L	U	U		
Bromoform	75252	1	1	0.25 ug/L	U	U		

*Analysis Method*      *8260B*

Bromomethane	74839	1	1	0.3 ug/L	U	<b>U</b>
Carbon Tetrachloride	56235	1	1	0.3 ug/L	U	<b>U</b>
Chlorobenzene	108907	0.353	1	0.25 ug/L	J	<b>J</b>
Chloroethane	75003	1	1	0.3 ug/L	U	<b>U</b>
Chloroform	67663	1	1	0.25 ug/L	U	<b>U</b>
Chloromethane	74873	1	1	0.3 ug/L	U	<b>U</b>
Chlorotrifluoroethylene	79389	10	10	3 ug/L	U	<b>U</b>
cis-1,2-Dichloroethene	156592	1	1	0.3 ug/L	U	<b>U</b>
cis-1,3-Dichloropropene	10061015	1	1	0.25 ug/L	U	<b>U</b>
Dibromochloromethane	124481	1	1	0.3 ug/L	U	<b>U</b>
Dibromomethane	74953	1	1	0.3 ug/L	U	<b>U</b>
Dichlorodifluoromethane	75718	1	1	0.3 ug/L	U	<b>U</b>
Ethylbenzene	100414	1	1	0.25 ug/L	U	<b>U</b>
Hexachlorobutadiene	87683	1	1	0.3 ug/L	U	<b>U</b>
Isopropylbenzene	98828	1	1	0.25 ug/L	U	<b>U</b>
m,p-Xylenes	136777612	2	2	0.5 ug/L	U	<b>U</b>
Methylene chloride	75092	5	5	2 ug/L	U	<b>U</b>
Methyl-tert-butyl ether (MTBE)	1634044	1	1	0.25 ug/L	U	<b>U</b>
n-Butylbenzene	104518	1	1	0.25 ug/L	U	<b>U</b>
n-Propylbenzene	103651	1	1	0.25 ug/L	U	<b>U</b>
o-Xylene	95476	1	1	0.3 ug/L	U	<b>U</b>
p-Isopropyltoluene	99876	1	1	0.25 ug/L	U	<b>U</b>
sec-Butylbenzene	135988	1	1	0.25 ug/L	U	<b>U</b>
Styrene	100425	1	1	0.25 ug/L	U	<b>U</b>
tert-Butylbenzene	98066	1	1	0.25 ug/L	U	<b>U</b>
Tetrachloroethene	127184	1	1	0.3 ug/L	U	<b>U</b>
Toluene	108883	1	1	0.25 ug/L	U	<b>U</b>
trans-1,2-Dichloroethene	156605	1	1	0.3 ug/L	U	<b>U</b>
trans-1,3-Dichloropropene	10061026	1	1	0.25 ug/L	U	<b>U</b>
Trichloroethene	79016	1	1	0.25 ug/L	U	<b>U</b>
Trichlorofluoromethane	75694	1	1	0.3 ug/L	U	<b>U</b>
Vinyl chloride	75014	1	1	0.5 ug/L	U	<b>U</b>

## Analysis Method 8260B

**Sample Name** HZBS0173S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805002 **Sample Date:** 8/20/2009 9:40:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1.98	1.98	0.594	ug/kg	U	U	
1,1,1-Trichloroethane	71556	1.98	1.98	0.594	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79345	1.98	1.98	0.594	ug/kg	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	9.9	9.9	3.17	ug/kg	U	U	
1,1,2-Trichloroethane	79005	1.98	1.98	0.594	ug/kg	U	U	
1,1-Dichloroethane	75343	1.98	1.98	0.594	ug/kg	U	U	
1,1-Dichloroethene	75354	1.98	1.98	0.594	ug/kg	U	U	
1,1-Dichloropropene	563586	1.98	1.98	0.594	ug/kg	U	U	
1,2,3-Trichlorobenzene	87616	1.98	1.98	0.594	ug/kg	U	U	
1,2,3-Trichloropropane	96184	1.98	1.98	0.594	ug/kg	U	U	
1,2,4-Trichlorobenzene	120821	1.98	1.98	0.594	ug/kg	U	U	
1,2,4-Trimethylbenzene	95636	1.98	1.98	0.594	ug/kg	U	U	
1,2-Dibromo-3-chloropropane	96128	1.98	1.98	0.594	ug/kg	U	U	
1,2-Dibromoethane (EDB)	106934	1.98	1.98	0.594	ug/kg	U	U	
1,2-Dichlorobenzene	95501	1.98	1.98	0.594	ug/kg	U	U	
1,2-Dichloroethane	107062	1.98	1.98	0.594	ug/kg	U	U	
1,2-Dichloropropane	78875	1.98	1.98	0.594	ug/kg	U	U	
1,3,5-Trimethylbenzene	108678	1.98	1.98	0.594	ug/kg	U	U	
1,3-Dichlorobenzene	541731	1.98	1.98	0.594	ug/kg	U	U	
1,3-Dichloropropane	142289	1.98	1.98	0.594	ug/kg	U	U	
1,4-Dichlorobenzene	106467	1.98	1.98	0.594	ug/kg	U	U	
2,2-dichloropropane	594207	1.98	1.98	0.594	ug/kg	U	U	
2-Butanone (MEK)	78933	9.9	9.9	2.97	ug/kg	U	U	
2-Chloro-1,1,1-trifluoroethane	75887	19.8	19.8	5.94	ug/kg	U	U	
2-Chloroethyl vinyl ether	110758	9.9	9.9	2.48	ug/kg	U	U	
2-Chlorotoluene	95498	1.98	1.98	0.594	ug/kg	U	U	
2-Hexanone	591786	9.9	9.9	2.97	ug/kg	U	U	
4-Chlorotoluene	106434	1.98	1.98	0.594	ug/kg	U	U	
4-Methyl-2-pentanone (MIBK)	108101	9.9	9.9	2.48	ug/kg	U	U	
Acetone	67641	9.9	9.9	3.29	ug/kg	U	U	
Benzene	71432	1.98	1.98	0.594	ug/kg	U	U	
Bromobenzene	108861	1.98	1.98	0.594	ug/kg	U	U	
Bromochloromethane	74975	1.98	1.98	0.654	ug/kg	U	U	
Bromodichloromethane	75274	1.98	1.98	0.594	ug/kg	U	U	
Bromoform	75252	1.98	1.98	0.594	ug/kg	U	U	

*Analysis Method*      **8260B**

Bromomethane	74839	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Carbon Tetrachloride	56235	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Chlorobenzene	108907	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Chloroethane	75003	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Chloroform	67663	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Chloromethane	74873	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Chlorotrifluoroethylene	79389	19.8	19.8	5.94 ug/kg	U	<b>U</b>
cis-1,2-Dichloroethene	156592	1.98	1.98	0.594 ug/kg	U	<b>U</b>
cis-1,3-Dichloropropene	10061015	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Dibromochloromethane	124481	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Dibromomethane	74953	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Dichlorodifluoromethane	75718	1.98	1.98	0.673 ug/kg	U	<b>U</b>
Ethylbenzene	100414	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Hexachlorobutadiene	87683	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Isopropylbenzene	98828	1.98	1.98	0.594 ug/kg	U	<b>U</b>
m,p-Xylenes	136777612	3.96	3.96	0.594 ug/kg	U	<b>U</b>
Methylene chloride	75092	9.9	9.9	3.96 ug/kg	U	<b>U</b>
Methyl-tert-butyl ether (MTBE)	1634044	1.98	1.98	0.594 ug/kg	U	<b>U</b>
n-Butylbenzene	104518	1.98	1.98	0.594 ug/kg	U	<b>U</b>
n-Propylbenzene	103651	1.98	1.98	0.594 ug/kg	U	<b>U</b>
o-Xylene	95476	1.98	1.98	0.594 ug/kg	U	<b>U</b>
p-Isopropyltoluene	99876	1.98	1.98	0.594 ug/kg	U	<b>U</b>
sec-Butylbenzene	135988	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Styrene	100425	0.858	1.98	0.594 ug/kg	J	<b>J</b>
tert-Butylbenzene	98066	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Tetrachloroethene	127184	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Toluene	108883	1.98	1.98	0.594 ug/kg	U	<b>U</b>
trans-1,2-Dichloroethene	156605	1.98	1.98	0.594 ug/kg	U	<b>U</b>
trans-1,3-Dichloropropene	10061026	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Trichloroethene	79016	1.98	1.98	0.654 ug/kg	U	<b>U</b>
Trichlorofluoromethane	75694	1.98	1.98	0.594 ug/kg	U	<b>U</b>
Vinyl chloride	75014	1.98	1.98	0.594 ug/kg	U	<b>U</b>

Analysis Method 8260B

Sample Name HZBS0173S002 Matrix Type: Soil Result Type: Primary Result  
 Lab Sample Name: 235805003 Sample Date: 8/20/2009 9:57:00 AM Validation Level: V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1.44	1.44	0.432	ug/kg	U	U	
1,1,1-Trichloroethane	71556	1.44	1.44	0.432	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79345	1.44	1.44	0.432	ug/kg	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	7.2	7.2	2.3	ug/kg	U	U	
1,1,2-Trichloroethane	79005	1.44	1.44	0.432	ug/kg	U	U	
1,1-Dichloroethane	75343	1.44	1.44	0.432	ug/kg	U	U	
1,1-Dichloroethene	75354	1.44	1.44	0.432	ug/kg	U	U	
1,1-Dichloropropene	563586	1.44	1.44	0.432	ug/kg	U	U	
1,2,3-Trichlorobenzene	87616	1.44	1.44	0.432	ug/kg	U	U	
1,2,3-Trichloropropane	96184	1.44	1.44	0.432	ug/kg	U	U	
1,2,4-Trichlorobenzene	120821	1.44	1.44	0.432	ug/kg	U	U	
1,2,4-Trimethylbenzene	95636	1.44	1.44	0.432	ug/kg	U	U	
1,2-Dibromo-3-chloropropane	96128	1.44	1.44	0.432	ug/kg	U	U	
1,2-Dibromoethane (EDB)	106934	1.44	1.44	0.432	ug/kg	U	U	
1,2-Dichlorobenzene	95501	1.44	1.44	0.432	ug/kg	U	U	
1,2-Dichloroethane	107062	1.44	1.44	0.432	ug/kg	U	U	
1,2-Dichloropropane	78875	1.44	1.44	0.432	ug/kg	U	U	
1,3,5-Trimethylbenzene	108678	1.44	1.44	0.432	ug/kg	U	U	
1,3-Dichlorobenzene	541731	1.44	1.44	0.432	ug/kg	U	U	
1,3-Dichloropropane	142289	1.44	1.44	0.432	ug/kg	U	U	
1,4-Dichlorobenzene	106467	1.44	1.44	0.432	ug/kg	U	U	
2,2-dichloropropane	594207	1.44	1.44	0.432	ug/kg	U	U	
2-Butanone (MEK)	78933	7.2	7.2	2.16	ug/kg	U	U	
2-Chloro-1,1,1-trifluoroethane	75887	14.4	14.4	4.32	ug/kg	U	U	
2-Chloroethyl vinyl ether	110758	7.2	7.2	1.8	ug/kg	U	U	
2-Chlorotoluene	95498	1.44	1.44	0.432	ug/kg	U	U	
2-Hexanone	591786	7.2	7.2	2.16	ug/kg	U	U	
4-Chlorotoluene	106434	1.44	1.44	0.432	ug/kg	U	U	
4-Methyl-2-pentanone (MIBK)	108101	7.2	7.2	1.8	ug/kg	U	U	
Acetone	67641	39.9	7.2	2.39	ug/kg			
Benzene	71432	1.44	1.44	0.432	ug/kg	U	U	
Bromobenzene	108861	1.44	1.44	0.432	ug/kg	U	U	
Bromochloromethane	74975	1.44	1.44	0.475	ug/kg	U	U	
Bromodichloromethane	75274	1.44	1.44	0.432	ug/kg	U	U	
Bromoform	75252	1.44	1.44	0.432	ug/kg	U	U	

*Analysis Method*      **8260B**

Bromomethane	74839	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Carbon Tetrachloride	56235	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Chlorobenzene	108907	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Chloroethane	75003	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Chloroform	67663	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Chloromethane	74873	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Chlorotrifluoroethylene	79389	14.4	14.4	4.32 ug/kg	U	<b>U</b>
cis-1,2-Dichloroethene	156592	1.44	1.44	0.432 ug/kg	U	<b>U</b>
cis-1,3-Dichloropropene	10061015	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Dibromochloromethane	124481	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Dibromomethane	74953	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Dichlorodifluoromethane	75718	1.44	1.44	0.489 ug/kg	U	<b>U</b>
Ethylbenzene	100414	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Hexachlorobutadiene	87683	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Isopropylbenzene	98828	1.44	1.44	0.432 ug/kg	U	<b>U</b>
m,p-Xylenes	136777612	2.88	2.88	0.432 ug/kg	U	<b>U</b>
Methylene chloride	75092	7.2	7.2	2.88 ug/kg	U	<b>U</b>
Methyl-tert-butyl ether (MTBE)	1634044	1.44	1.44	0.432 ug/kg	U	<b>U</b>
n-Butylbenzene	104518	1.44	1.44	0.432 ug/kg	U	<b>U</b>
n-Propylbenzene	103651	1.44	1.44	0.432 ug/kg	U	<b>U</b>
o-Xylene	95476	1.44	1.44	0.432 ug/kg	U	<b>U</b>
p-Isopropyltoluene	99876	1.44	1.44	0.432 ug/kg	U	<b>U</b>
sec-Butylbenzene	135988	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Styrene	100425	0.724	1.44	0.432 ug/kg	J	<b>J</b>
tert-Butylbenzene	98066	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Tetrachloroethene	127184	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Toluene	108883	1.44	1.44	0.432 ug/kg	U	<b>U</b>
trans-1,2-Dichloroethene	156605	1.44	1.44	0.432 ug/kg	U	<b>U</b>
trans-1,3-Dichloropropene	10061026	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Trichloroethene	79016	1.44	1.44	0.475 ug/kg	U	<b>U</b>
Trichlorofluoromethane	75694	1.44	1.44	0.432 ug/kg	U	<b>U</b>
Vinyl chloride	75014	1.44	1.44	0.432 ug/kg	U	<b>U</b>

## Analysis Method 8260B

**Sample Name** HZBS0174S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805004 **Sample Date:** 8/20/2009 10:35:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1.19	1.19	0.357	ug/kg	U	U	
1,1,1-Trichloroethane	71556	1.19	1.19	0.357	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79345	1.19	1.19	0.357	ug/kg	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	5.96	5.96	1.91	ug/kg	U	U	
1,1,2-Trichloroethane	79005	1.19	1.19	0.357	ug/kg	U	U	
1,1-Dichloroethane	75343	1.19	1.19	0.357	ug/kg	U	U	
1,1-Dichloroethene	75354	1.19	1.19	0.357	ug/kg	U	U	
1,1-Dichloropropene	563586	1.19	1.19	0.357	ug/kg	U	U	
1,2,3-Trichlorobenzene	87616	1.19	1.19	0.357	ug/kg	U	U	
1,2,3-Trichloropropane	96184	1.19	1.19	0.357	ug/kg	U	U	
1,2,4-Trichlorobenzene	120821	1.19	1.19	0.357	ug/kg	U	U	
1,2,4-Trimethylbenzene	95636	1.19	1.19	0.357	ug/kg	U	U	
1,2-Dibromo-3-chloropropane	96128	1.19	1.19	0.357	ug/kg	U	U	
1,2-Dibromoethane (EDB)	106934	1.19	1.19	0.357	ug/kg	U	U	
1,2-Dichlorobenzene	95501	1.19	1.19	0.357	ug/kg	U	U	
1,2-Dichloroethane	107062	1.19	1.19	0.357	ug/kg	U	U	
1,2-Dichloropropane	78875	1.19	1.19	0.357	ug/kg	U	U	
1,3,5-Trimethylbenzene	108678	1.19	1.19	0.357	ug/kg	U	U	
1,3-Dichlorobenzene	541731	1.19	1.19	0.357	ug/kg	U	U	
1,3-Dichloropropane	142289	1.19	1.19	0.357	ug/kg	U	U	
1,4-Dichlorobenzene	106467	1.19	1.19	0.357	ug/kg	U	U	
2,2-dichloropropane	594207	1.19	1.19	0.357	ug/kg	U	U	
2-Butanone (MEK)	78933	5.96	5.96	1.79	ug/kg	U	U	
2-Chloro-1,1,1-trifluoroethane	75887	11.9	11.9	3.57	ug/kg	U	U	
2-Chloroethyl vinyl ether	110758	5.96	5.96	1.49	ug/kg	U	U	
2-Chlorotoluene	95498	1.19	1.19	0.357	ug/kg	U	U	
2-Hexanone	591786	5.96	5.96	1.79	ug/kg	U	U	
4-Chlorotoluene	106434	1.19	1.19	0.357	ug/kg	U	U	
4-Methyl-2-pentanone (MIBK)	108101	5.96	5.96	1.49	ug/kg	U	U	
Acetone	67641	7.73	5.96	1.98	ug/kg			
Benzene	71432	1.19	1.19	0.357	ug/kg	U	U	
Bromobenzene	108861	1.19	1.19	0.357	ug/kg	U	U	
Bromochloromethane	74975	1.19	1.19	0.393	ug/kg	U	U	
Bromodichloromethane	75274	1.19	1.19	0.357	ug/kg	U	U	
Bromoform	75252	1.19	1.19	0.357	ug/kg	U	U	

*Analysis Method*      **8260B**

Bromomethane	74839	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Carbon Tetrachloride	56235	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Chlorobenzene	108907	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Chloroethane	75003	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Chloroform	67663	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Chloromethane	74873	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Chlorotrifluoroethylene	79389	11.9	11.9	3.57 ug/kg	U	<b>U</b>
cis-1,2-Dichloroethene	156592	1.19	1.19	0.357 ug/kg	U	<b>U</b>
cis-1,3-Dichloropropene	10061015	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Dibromochloromethane	124481	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Dibromomethane	74953	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Dichlorodifluoromethane	75718	1.19	1.19	0.405 ug/kg	U	<b>U</b>
Ethylbenzene	100414	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Hexachlorobutadiene	87683	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Isopropylbenzene	98828	1.19	1.19	0.357 ug/kg	U	<b>U</b>
m,p-Xylenes	136777612	2.38	2.38	0.357 ug/kg	U	<b>U</b>
Methylene chloride	75092	5.96	5.96	2.38 ug/kg	U	<b>U</b>
Methyl-tert-butyl ether (MTBE)	1634044	1.19	1.19	0.357 ug/kg	U	<b>U</b>
n-Butylbenzene	104518	1.19	1.19	0.357 ug/kg	U	<b>U</b>
n-Propylbenzene	103651	1.19	1.19	0.357 ug/kg	U	<b>U</b>
o-Xylene	95476	1.19	1.19	0.357 ug/kg	U	<b>U</b>
p-Isopropyltoluene	99876	1.19	1.19	0.357 ug/kg	U	<b>U</b>
sec-Butylbenzene	135988	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Styrene	100425	0.471	1.19	0.357 ug/kg	J	<b>J</b>
tert-Butylbenzene	98066	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Tetrachloroethene	127184	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Toluene	108883	1.19	1.19	0.357 ug/kg	U	<b>U</b>
trans-1,2-Dichloroethene	156605	1.19	1.19	0.357 ug/kg	U	<b>U</b>
trans-1,3-Dichloropropene	10061026	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Trichloroethene	79016	1.19	1.19	0.393 ug/kg	U	<b>U</b>
Trichlorofluoromethane	75694	1.19	1.19	0.357 ug/kg	U	<b>U</b>
Vinyl chloride	75014	1.19	1.19	0.357 ug/kg	U	<b>U</b>

# Analysis Method 8260B

**Sample Name** HZBS0174S002      **Matrix Type:** Soil      **Result Type:** Primary Result  
**Lab Sample Name:** 235805005      **Sample Date:** 8/20/2009 10:56:00 AM      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1.09	1.09	0.328	ug/kg	U	U	
1,1,1-Trichloroethane	71556	1.09	1.09	0.328	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79345	1.09	1.09	0.328	ug/kg	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	5.47	5.47	1.75	ug/kg	U	U	
1,1,2-Trichloroethane	79005	1.09	1.09	0.328	ug/kg	U	U	
1,1-Dichloroethane	75343	1.09	1.09	0.328	ug/kg	U	U	
1,1-Dichloroethene	75354	1.09	1.09	0.328	ug/kg	U	U	
1,1-Dichloropropene	563586	1.09	1.09	0.328	ug/kg	U	U	
1,2,3-Trichlorobenzene	87616	1.09	1.09	0.328	ug/kg	U	U	
1,2,3-Trichloropropane	96184	1.09	1.09	0.328	ug/kg	U	U	
1,2,4-Trichlorobenzene	120821	1.09	1.09	0.328	ug/kg	U	U	
1,2,4-Trimethylbenzene	95636	1.09	1.09	0.328	ug/kg	U	U	
1,2-Dibromo-3-chloropropane	96128	1.09	1.09	0.328	ug/kg	U	U	
1,2-Dibromoethane (EDB)	106934	1.09	1.09	0.328	ug/kg	U	U	
1,2-Dichlorobenzene	95501	1.09	1.09	0.328	ug/kg	U	U	
1,2-Dichloroethane	107062	1.09	1.09	0.328	ug/kg	U	U	
1,2-Dichloropropane	78875	1.09	1.09	0.328	ug/kg	U	U	
1,3,5-Trimethylbenzene	108678	1.09	1.09	0.328	ug/kg	U	U	
1,3-Dichlorobenzene	541731	1.09	1.09	0.328	ug/kg	U	U	
1,3-Dichloropropane	142289	1.09	1.09	0.328	ug/kg	U	U	
1,4-Dichlorobenzene	106467	1.09	1.09	0.328	ug/kg	U	U	
2,2-dichloropropane	594207	1.09	1.09	0.328	ug/kg	U	U	
2-Butanone (MEK)	78933	5.47	5.47	1.64	ug/kg	U	U	
2-Chloro-1,1,1-trifluoroethane	75887	10.9	10.9	3.28	ug/kg	U	U	
2-Chloroethyl vinyl ether	110758	5.47	5.47	1.37	ug/kg	U	U	
2-Chlorotoluene	95498	1.09	1.09	0.328	ug/kg	U	U	
2-Hexanone	591786	5.47	5.47	1.64	ug/kg	U	U	
4-Chlorotoluene	106434	1.09	1.09	0.328	ug/kg	U	U	
4-Methyl-2-pentanone (MIBK)	108101	5.47	5.47	1.37	ug/kg	U	U	
Acetone	67641	5.47	5.47	1.82	ug/kg	U	U	
Benzene	71432	1.09	1.09	0.328	ug/kg	U	U	
Bromobenzene	108861	1.09	1.09	0.328	ug/kg	U	U	
Bromochloromethane	74975	1.09	1.09	0.361	ug/kg	U	U	
Bromodichloromethane	75274	1.09	1.09	0.328	ug/kg	U	U	
Bromoform	75252	1.09	1.09	0.328	ug/kg	U	U	

*Analysis Method*      **8260B**

Bromomethane	74839	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Carbon Tetrachloride	56235	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Chlorobenzene	108907	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Chloroethane	75003	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Chloroform	67663	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Chloromethane	74873	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Chlorotrifluoroethylene	79389	10.9	10.9	3.28 ug/kg	U	<b>U</b>
cis-1,2-Dichloroethene	156592	1.09	1.09	0.328 ug/kg	U	<b>U</b>
cis-1,3-Dichloropropene	10061015	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Dibromochloromethane	124481	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Dibromomethane	74953	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Dichlorodifluoromethane	75718	1.09	1.09	0.372 ug/kg	U	<b>U</b>
Ethylbenzene	100414	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Hexachlorobutadiene	87683	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Isopropylbenzene	98828	1.09	1.09	0.328 ug/kg	U	<b>U</b>
m,p-Xylenes	136777612	2.19	2.19	0.328 ug/kg	U	<b>U</b>
Methylene chloride	75092	5.47	5.47	2.19 ug/kg	U	<b>U</b>
Methyl-tert-butyl ether (MTBE)	1634044	1.09	1.09	0.328 ug/kg	U	<b>U</b>
n-Butylbenzene	104518	1.09	1.09	0.328 ug/kg	U	<b>U</b>
n-Propylbenzene	103651	1.09	1.09	0.328 ug/kg	U	<b>U</b>
o-Xylene	95476	1.09	1.09	0.328 ug/kg	U	<b>U</b>
p-Isopropyltoluene	99876	1.09	1.09	0.328 ug/kg	U	<b>U</b>
sec-Butylbenzene	135988	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Styrene	100425	0.371	1.09	0.328 ug/kg	J	<b>J</b>
tert-Butylbenzene	98066	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Tetrachloroethene	127184	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Toluene	108883	1.09	1.09	0.328 ug/kg	U	<b>U</b>
trans-1,2-Dichloroethene	156605	1.09	1.09	0.328 ug/kg	U	<b>U</b>
trans-1,3-Dichloropropene	10061026	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Trichloroethene	79016	1.09	1.09	0.361 ug/kg	U	<b>U</b>
Trichlorofluoromethane	75694	1.09	1.09	0.328 ug/kg	U	<b>U</b>
Vinyl chloride	75014	1.09	1.09	0.328 ug/kg	U	<b>U</b>

Analysis Method 8260B

Sample Name HZTB2003T001 Matrix Type: Water Result Type: Primary Result  
 Lab Sample Name: 235805006 Sample Date: 8/20/2009 8:49:00 AM Validation Level: V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1	1	0.3 ug/L	U	U		
1,1,1-Trichloroethane	71556	1	1	0.325 ug/L	U	U		
1,1,2,2-Tetrachloroethane	79345	1	1	0.25 ug/L	U	U		
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	5	5	1 ug/L	U	U		
1,1,2-Trichloroethane	79005	1	1	0.25 ug/L	U	U		
1,1-Dichloroethane	75343	1	1	0.3 ug/L	U	U		
1,1-Dichloroethene	75354	1	1	0.3 ug/L	U	U		
1,1-Dichloropropene	563586	1	1	0.25 ug/L	U	U		
1,2,3-Trichlorobenzene	87616	1	1	0.332 ug/L	U	U		
1,2,3-Trichloropropane	96184	1	1	0.3 ug/L	U	U		
1,2,4-Trichlorobenzene	120821	1	1	0.3 ug/L	U	U		
1,2,4-Trimethylbenzene	95636	1	1	0.25 ug/L	U	U		
1,2-Dibromo-3-chloropropane	96128	1	1	0.3 ug/L	U	U		
1,2-Dibromoethane (EDB)	106934	1	1	0.25 ug/L	U	U		
1,2-Dichlorobenzene	95501	1	1	0.25 ug/L	U	U		
1,2-Dichloroethane	107062	1	1	0.25 ug/L	U	U		
1,2-Dichloropropane	78875	1	1	0.25 ug/L	U	U		
1,3,5-Trimethylbenzene	108678	1	1	0.25 ug/L	U	U		
1,3-Dichlorobenzene	541731	1	1	0.25 ug/L	U	U		
1,3-Dichloropropane	142289	1	1	0.3 ug/L	U	U		
1,4-Dichlorobenzene	106467	1	1	0.25 ug/L	U	U		
2,2-dichloropropane	594207	1	1	0.3 ug/L	U	U		
2-Butanone (MEK)	78933	5	5	1.25 ug/L	U	U		
2-Chloro-1,1,1-trifluoroethane	75887	10	10	3 ug/L	U	U		
2-Chloroethyl vinyl ether	110758	5	5	1.5 ug/L	U	U		
2-Chlorotoluene	95498	1	1	0.25 ug/L	U	U		
2-Hexanone	591786	5	5	1.25 ug/L	U	U		
4-Chlorotoluene	106434	1	1	0.25 ug/L	U	U		
4-Methyl-2-pentanone (MIBK)	108101	5	5	1.25 ug/L	U	U		
Acetone	67641	5	5	1.5 ug/L	U	U		
Benzene	71432	1	1	0.3 ug/L	U	U		
Bromobenzene	108861	1	1	0.25 ug/L	U	U		
Bromochloromethane	74975	1	1	0.3 ug/L	U	U		
Bromodichloromethane	75274	1	1	0.25 ug/L	U	U		
Bromoform	75252	1	1	0.25 ug/L	U	U		

*Analysis Method*      *8260B*

Bromomethane	74839	1	1	0.3 ug/L	U	<b>U</b>
Carbon Tetrachloride	56235	1	1	0.3 ug/L	U	<b>U</b>
Chlorobenzene	108907	1	1	0.25 ug/L	U	<b>U</b>
Chloroethane	75003	1	1	0.3 ug/L	U	<b>U</b>
Chloroform	67663	1	1	0.25 ug/L	U	<b>U</b>
Chloromethane	74873	1	1	0.3 ug/L	U	<b>U</b>
Chlorotrifluoroethylene	79389	10	10	3 ug/L	U	<b>U</b>
cis-1,2-Dichloroethene	156592	1	1	0.3 ug/L	U	<b>U</b>
cis-1,3-Dichloropropene	10061015	1	1	0.25 ug/L	U	<b>U</b>
Dibromochloromethane	124481	1	1	0.3 ug/L	U	<b>U</b>
Dibromomethane	74953	1	1	0.3 ug/L	U	<b>U</b>
Dichlorodifluoromethane	75718	1	1	0.3 ug/L	U	<b>U</b>
Ethylbenzene	100414	1	1	0.25 ug/L	U	<b>U</b>
Hexachlorobutadiene	87683	1	1	0.3 ug/L	U	<b>U</b>
Isopropylbenzene	98828	1	1	0.25 ug/L	U	<b>U</b>
m,p-Xylenes	136777612	2	2	0.5 ug/L	U	<b>U</b>
Methylene chloride	75092	5	5	2 ug/L	U	<b>U</b>
Methyl-tert-butyl ether (MTBE)	1634044	1	1	0.25 ug/L	U	<b>U</b>
n-Butylbenzene	104518	1	1	0.25 ug/L	U	<b>U</b>
n-Propylbenzene	103651	1	1	0.25 ug/L	U	<b>U</b>
o-Xylene	95476	1	1	0.3 ug/L	U	<b>U</b>
p-Isopropyltoluene	99876	1	1	0.25 ug/L	U	<b>U</b>
sec-Butylbenzene	135988	1	1	0.25 ug/L	U	<b>U</b>
Styrene	100425	1	1	0.25 ug/L	U	<b>U</b>
tert-Butylbenzene	98066	1	1	0.25 ug/L	U	<b>U</b>
Tetrachloroethene	127184	1	1	0.3 ug/L	U	<b>U</b>
Toluene	108883	1	1	0.25 ug/L	U	<b>U</b>
trans-1,2-Dichloroethene	156605	1	1	0.3 ug/L	U	<b>U</b>
trans-1,3-Dichloropropene	10061026	1	1	0.25 ug/L	U	<b>U</b>
Trichloroethene	79016	1	1	0.25 ug/L	U	<b>U</b>
Trichlorofluoromethane	75694	1	1	0.3 ug/L	U	<b>U</b>
Vinyl chloride	75014	1	1	0.5 ug/L	U	<b>U</b>

Analysis Method 8270C SIM

Sample Name EBQW2234 Matrix Type: Water Result Type: Primary Result  
 Lab Sample Name: 235805001 Sample Date: 8/20/2009 2:00:00 PM Validation Level: V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1-Methylnaphthalene	90120	0.472	0.472	0.142	ug/L	U	U	
2-Methylnaphthalene	91576	0.472	0.472	0.142	ug/L	U	U	
Acenaphthene	83329	0.472	0.472	0.146	ug/L	U	U	
Acenaphthylene	208968	0.472	0.472	0.0943	ug/L	U	U	
Anthracene	120127	0.472	0.472	0.0943	ug/L	U	U	
Benzo(a)anthracene	56553	0.472	0.472	0.0943	ug/L	U	U	
Benzo(a)pyrene	50328	0.472	0.472	0.0943	ug/L	U	U	
Benzo(b)fluoranthene	205992	0.472	0.472	0.0943	ug/L	U	U	
Benzo(ghi)perylene	191242	0.472	0.472	0.0943	ug/L	U	U	
Benzo(k)fluoranthene	207089	0.472	0.472	0.0943	ug/L	U	U	
bis(2-ethylhexyl)phthalate	117817	0.472	0.472	0.142	ug/L	BJ	U	B, result changed from 0.23
Butyl benzyl phthalate	85687	0.472	0.472	0.142	ug/L	U	U	
Chrysene	218019	0.472	0.472	0.0943	ug/L	U	U	
Dibenzo(a,h)anthracene	53703	0.472	0.472	0.0943	ug/L	U	U	
Diethylphthalate	84662	0.472	0.472	0.142	ug/L	U	U	
Dimethylphthalate	131113	0.472	0.472	0.142	ug/L	U	U	
Di-n-butylphthalate	84742	0.472	0.472	0.142	ug/L	U	U	
Di-n-octyl-phthalate	117840	0.472	0.472	0.142	ug/L	U	U	
Fluoranthene	206440	0.472	0.472	0.0943	ug/L	U	U	
Fluorene	86737	0.472	0.472	0.0943	ug/L	U	U	
Indeno(1,2,3-cd)pyrene	193395	0.472	0.472	0.0943	ug/L	U	U	
Naphthalene	91203	0.472	0.472	0.142	ug/L	U	U	
n-Nitrosodimethylamine	62759	0.472	0.472	0.0943	ug/L	U	U	
Phenanthrene	85018	0.472	0.472	0.0943	ug/L	U	U	
Pyrene	129000	0.472	0.472	0.142	ug/L	U	U	

*Analysis Method 8270C SIM*

**Sample Name** HZBS0173S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805002 **Sample Date:** 8/20/2009 9:40:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1-Methylnaphthalene	90120	17.1	17.1	5.12	ug/kg	U	U	
2-Methylnaphthalene	91576	17.1	17.1	3.41	ug/kg	U	U	
Acenaphthene	83329	17.1	17.1	5.7	ug/kg	U	U	
Acenaphthylene	208968	17.1	17.1	5.12	ug/kg	U	U	
Anthracene	120127	17.1	17.1	3.41	ug/kg	U	U	
Benzo(a)anthracene	56553	17.1	17.1	5.12	ug/kg	U	U	
Benzo(a)pyrene	50328	17.1	17.1	5.12	ug/kg	U	U	
Benzo(b)fluoranthene	205992	17.1	17.1	5.12	ug/kg	U	U	
Benzo(ghi)perylene	191242	17.1	17.1	5.12	ug/kg	U	U	
Benzo(k)fluoranthene	207089	17.1	17.1	5.12	ug/kg	U	U	
bis(2-ethylhexyl)phthalate	117817	17.1	17.1	5.63	ug/kg	BJ	U	<b>B, result changed from 16.8</b>
Butyl benzyl phthalate	85687	17.1	17.1	5.12	ug/kg	U	U	
Chrysene	218019	17.1	17.1	5.12	ug/kg	U	U	
Dibenzo(a,h)anthracene	53703	17.1	17.1	5.12	ug/kg	U	U	
Diethylphthalate	84662	17.1	17.1	5.12	ug/kg	U	U	
Dimethylphthalate	131113	17.1	17.1	5.12	ug/kg	U	U	
Di-n-butylphthalate	84742	17.1	17.1	5.12	ug/kg	U	U	
Di-n-octyl-phthalate	117840	17.1	17.1	5.12	ug/kg	U	U	
Fluoranthene	206440	17.1	17.1	5.12	ug/kg	U	U	
Fluorene	86737	17.1	17.1	5.12	ug/kg	U	U	
Indeno(1,2,3-cd)pyrene	193395	17.1	17.1	5.12	ug/kg	U	U	
Naphthalene	91203	17.1	17.1	5.12	ug/kg	U	U	
n-Nitrosodimethylamine	62759	17.1	17.1	3.41	ug/kg	U	U	
Phenanthrene	85018	17.1	17.1	5.12	ug/kg	U	U	
Pyrene	129000	17.1	17.1	5.36	ug/kg	U	U	

*Analysis Method 8270C SIM*

**Sample Name** HZBS0173S002 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805003 **Sample Date:** 8/20/2009 9:57:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1-Methylnaphthalene	90120	70.9	70.9	21.3 ug/kg	U	U		
2-Methylnaphthalene	91576	70.9	70.9	14.2 ug/kg	U	U		
Acenaphthene	83329	70.9	70.9	23.7 ug/kg	U	U		
Acenaphthylene	208968	70.9	70.9	21.3 ug/kg	U	U		
Anthracene	120127	70.9	70.9	14.2 ug/kg	U	U		
Benzo(a)anthracene	56553	70.9	70.9	21.3 ug/kg	U	U		
Benzo(a)pyrene	50328	70.9	70.9	21.3 ug/kg	U	U		
Benzo(b)fluoranthene	205992	70.9	70.9	21.3 ug/kg	U	U		
Benzo(ghi)perylene	191242	70.9	70.9	21.3 ug/kg	U	U		
Benzo(k)fluoranthene	207089	70.9	70.9	21.3 ug/kg	U	U		
bis(2-ethylhexyl)phthalate	117817	70.9	70.9	23.4 ug/kg	U	U		
Butyl benzyl phthalate	85687	70.9	70.9	21.3 ug/kg	U	U		
Chrysene	218019	70.9	70.9	21.3 ug/kg	U	U		
Dibenzo(a,h)anthracene	53703	70.9	70.9	21.3 ug/kg	U	U		
Diethylphthalate	84662	70.9	70.9	21.3 ug/kg	U	U		
Dimethylphthalate	131113	70.9	70.9	21.3 ug/kg	U	U		
Di-n-butylphthalate	84742	70.9	70.9	21.3 ug/kg	U	U		
Di-n-octyl-phthalate	117840	70.9	70.9	21.3 ug/kg	U	U		
Fluoranthene	206440	70.9	70.9	21.3 ug/kg	U	U		
Fluorene	86737	70.9	70.9	21.3 ug/kg	U	U		
Indeno(1,2,3-cd)pyrene	193395	70.9	70.9	21.3 ug/kg	U	U		
Naphthalene	91203	70.9	70.9	21.3 ug/kg	U	U		
n-Nitrosodimethylamine	62759	70.9	70.9	14.2 ug/kg	U	U		
Phenanthrene	85018	70.9	70.9	21.3 ug/kg	U	U		
Pyrene	129000	70.9	70.9	22.3 ug/kg	U	U		

Analysis Method 8270C SIM

Sample Name HZBS0174S001 Matrix Type: Soil Result Type: Primary Result  
 Lab Sample Name: 235805004 Sample Date: 8/20/2009 10:35:00 AM Validation Level: V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1-Methylnaphthalene	90120	17.4	17.4	5.23	ug/kg	U	U	
2-Methylnaphthalene	91576	17.4	17.4	3.49	ug/kg	U	U	
Acenaphthene	83329	17.4	17.4	5.82	ug/kg	U	U	
Acenaphthylene	208968	17.4	17.4	5.23	ug/kg	U	U	
Anthracene	120127	17.4	17.4	3.49	ug/kg	U	U	
Benzo(a)anthracene	56553	17.4	17.4	5.23	ug/kg	U	U	
Benzo(a)pyrene	50328	17.4	17.4	5.23	ug/kg	U	U	
Benzo(b)fluoranthene	205992	17.4	17.4	5.23	ug/kg	U	U	
Benzo(ghi)perylene	191242	17.4	17.4	5.23	ug/kg	U	U	
Benzo(k)fluoranthene	207089	17.4	17.4	5.23	ug/kg	U	U	
bis(2-ethylhexyl)phthalate	117817	17.4	17.4	5.75	ug/kg	BJ	U	B, result changed from 12.2
Butyl benzyl phthalate	85687	17.4	17.4	5.23	ug/kg	U	U	
Chrysene	218019	17.4	17.4	5.23	ug/kg	U	U	
Dibenzo(a,h)anthracene	53703	17.4	17.4	5.23	ug/kg	U	U	
Diethylphthalate	84662	17.4	17.4	5.23	ug/kg	U	U	
Dimethylphthalate	131113	17.4	17.4	5.23	ug/kg	U	U	
Di-n-butylphthalate	84742	17.4	17.4	5.23	ug/kg	U	U	
Di-n-octyl-phthalate	117840	17.4	17.4	5.23	ug/kg	U	U	
Fluoranthene	206440	17.4	17.4	5.23	ug/kg	U	U	
Fluorene	86737	17.4	17.4	5.23	ug/kg	U	U	
Indeno(1,2,3-cd)pyrene	193395	17.4	17.4	5.23	ug/kg	U	U	
Naphthalene	91203	17.4	17.4	5.23	ug/kg	U	U	
n-Nitrosodimethylamine	62759	17.4	17.4	3.49	ug/kg	U	U	
Phenanthrene	85018	17.4	17.4	5.23	ug/kg	U	U	
Pyrene	129000	17.4	17.4	5.48	ug/kg	U	U	

*Analysis Method 8270C SIM*

**Sample Name** HZBS0174S002 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** 235805005 **Sample Date:** 8/20/2009 10:56:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1-Methylnaphthalene	90120	17.5	17.5	5.24	ug/kg	U	U	
2-Methylnaphthalene	91576	17.5	17.5	3.5	ug/kg	U	U	
Acenaphthene	83329	17.5	17.5	5.84	ug/kg	U	U	
Acenaphthylene	208968	17.5	17.5	5.24	ug/kg	U	U	
Anthracene	120127	17.5	17.5	3.5	ug/kg	U	U	
Benzo(a)anthracene	56553	17.5	17.5	5.24	ug/kg	U	U	
Benzo(a)pyrene	50328	17.5	17.5	5.24	ug/kg	U	U	
Benzo(b)fluoranthene	205992	17.5	17.5	5.24	ug/kg	U	U	
Benzo(ghi)perylene	191242	17.5	17.5	5.24	ug/kg	U	U	
Benzo(k)fluoranthene	207089	17.5	17.5	5.24	ug/kg	U	U	
bis(2-ethylhexyl)phthalate	117817	17.5	17.5	5.77	ug/kg	BJ	U	B, result changed from 12.2
Butyl benzyl phthalate	85687	17.5	17.5	5.24	ug/kg	U	U	
Chrysene	218019	17.5	17.5	5.24	ug/kg	U	U	
Dibenzo(a,h)anthracene	53703	17.5	17.5	5.24	ug/kg	U	U	
Diethylphthalate	84662	17.5	17.5	5.24	ug/kg	U	U	
Dimethylphthalate	131113	17.5	17.5	5.24	ug/kg	U	U	
Di-n-butylphthalate	84742	17.5	17.5	5.24	ug/kg	U	U	
Di-n-octyl-phthalate	117840	17.5	17.5	5.24	ug/kg	U	U	
Fluoranthene	206440	17.5	17.5	5.24	ug/kg	U	U	
Fluorene	86737	17.5	17.5	5.24	ug/kg	U	U	
Indeno(1,2,3-cd)pyrene	193395	17.5	17.5	5.24	ug/kg	U	U	
Naphthalene	91203	17.5	17.5	5.24	ug/kg	U	U	
n-Nitrosodimethylamine	62759	17.5	17.5	3.5	ug/kg	U	U	
Phenanthrene	85018	17.5	17.5	5.24	ug/kg	U	U	
Pyrene	129000	17.5	17.5	5.49	ug/kg	U	U	

Analysis Method 8321A

<b>Sample Name</b>	EBQW2234	<b>Matrix Type:</b> Water				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	235805001	<b>Sample Date:</b> 8/20/2009 2:00:00 PM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
2,4-diamino-6-nitrotoluene	6629294	1.3	1.3		0.39 ug/L	U	U	
2,6-diamino-4-nitrotoluene	59229753	1.3	1.3		0.39 ug/L	U	U	
<b>Sample Name</b>	HZBS0173S001	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	235805002	<b>Sample Date:</b> 8/20/2009 9:40:00 AM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
2,4-diamino-6-nitrotoluene	6629294	2000	2000		500 ug/kg	U	U	
2,6-diamino-4-nitrotoluene	59229753	2000	2000		500 ug/kg	U	U	
<b>Sample Name</b>	HZBS0173S002	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	235805003	<b>Sample Date:</b> 8/20/2009 9:57:00 AM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
2,4-diamino-6-nitrotoluene	6629294	2000	2000		500 ug/kg	U	U	
2,6-diamino-4-nitrotoluene	59229753	2000	2000		500 ug/kg	U	U	
<b>Sample Name</b>	HZBS0174S001	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	235805004	<b>Sample Date:</b> 8/20/2009 10:35:00 AM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
2,4-diamino-6-nitrotoluene	6629294	2000	2000		500 ug/kg	U	U	
2,6-diamino-4-nitrotoluene	59229753	2000	2000		500 ug/kg	U	U	
<b>Sample Name</b>	HZBS0174S002	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	235805005	<b>Sample Date:</b> 8/20/2009 10:56:00 AM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
2,4-diamino-6-nitrotoluene	6629294	2000	2000		500 ug/kg	U	U	
2,6-diamino-4-nitrotoluene	59229753	2000	2000		500 ug/kg	U	U	

Analysis Method 8330

**Sample Name** EBQW2234 **Matrix Type:** Water **Result Type:** Lab Repeat An  
**Lab Sample Name:** 235805001 **Sample Date:** 8/20/2009 2:00:00 PM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,3,5-Trinitrobenzene	99354	0.325	0.325	0.0649	ug/L	U	U	
2,4,6-Trinitrotoluene	118967	0.487	0.487	0.162	ug/L	U	U	
2,4-Dinitrotoluene	121142	0.487	0.487	0.162	ug/L	U	U	
2,6-Dinitrotoluene	606202	0.487	0.487	0.162	ug/L	U	U	
4-Amino-2,6-Dinitrotoluene	19406510	0.487	0.487	0.162	ug/L	U	U	
HMX	2691410	0.487	0.487	0.162	ug/L	U	UJ	L
m-Dinitrobenzene	99650	0.325	0.325	0.0649	ug/L	U	U	
m-Nitrotoluene	99081	0.325	0.325	0.126	ug/L	U	U	
Nitrobenzene	98953	0.325	0.325	0.0649	ug/L	U	U	
Nitroglycerin	55630	1.95	1.95	0.649	ug/L	U	U	
o-Nitrotoluene	88722	0.487	0.487	0.162	ug/L	U	U	
PETN	78115	1.95	1.95	0.649	ug/L	U	U	
p-Nitrotoluene	99990	0.487	0.487	0.162	ug/L	U	U	
RDX	121824	0.487	0.487	0.162	ug/L	U	U	
Tetryl	479458	1.46	1.46	0.487	ug/L	U	U	

**Sample Name** HZBS0173S001 **Matrix Type:** Soil **Result Type:** Lab Repeat An  
**Lab Sample Name:** 235805002 **Sample Date:** 8/20/2009 9:40:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,3,5-Trinitrobenzene	99354	150	150	50	ug/kg	U	U	
2,4,6-Trinitrotoluene	118967	150	150	50	ug/kg	U	U	
2,4-Dinitrotoluene	121142	150	150	50	ug/kg	U	U	
2,6-Dinitrotoluene	606202	150	150	50	ug/kg	U	U	
2-Amino-4,6-Dinitrotoluene	35572782	150	150	50	ug/kg	U	U	
4-Amino-2,6-Dinitrotoluene	19406510	150	150	50	ug/kg	U	U	
HMX	2691410	150	150	50	ug/kg	U	U	
m-Dinitrobenzene	99650	150	150	50	ug/kg	U	U	
m-Nitrotoluene	99081	150	150	50	ug/kg	U	U	
Nitrobenzene	98953	150	150	50	ug/kg	U	U	
Nitroglycerin	55630	1000	1000	250	ug/kg	U	U	
o-Nitrotoluene	88722	150	150	50	ug/kg	U	U	
PETN	78115	500	500	82.5	ug/kg	U	U	
p-Nitrotoluene	99990	150	150	50	ug/kg	U	U	
RDX	121824	150	150	50	ug/kg	U	U	
Tetryl	479458	150	150	50	ug/kg	U	U	

*Analysis Method*     8330

**Sample Name**     HZBS0173S002                      **Matrix Type:** Soil                      **Result Type:** Lab Repeat An  
**Lab Sample Name:**     235805003                      **Sample Date:** 8/20/2009 9:57:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,3,5-Trinitrobenzene	99354	150	150		50 ug/kg	U	U	
2,4,6-Trinitrotoluene	118967	150	150		50 ug/kg	U	U	
2,4-Dinitrotoluene	121142	150	150		50 ug/kg	U	U	
2,6-Dinitrotoluene	606202	150	150		50 ug/kg	U	U	
2-Amino-4,6-Dinitrotoluene	35572782	150	150		50 ug/kg	U	U	
4-Amino-2,6-Dinitrotoluene	19406510	150	150		50 ug/kg	U	U	
HMX	2691410	150	150		50 ug/kg	U	U	
m-Dinitrobenzene	99650	150	150		50 ug/kg	U	U	
m-Nitrotoluene	99081	150	150		50 ug/kg	U	U	
Nitrobenzene	98953	150	150		50 ug/kg	U	U	
Nitroglycerin	55630	1000	1000		250 ug/kg	U	U	
o-Nitrotoluene	88722	150	150		50 ug/kg	U	U	
PETN	78115	500	500		82.5 ug/kg	U	U	
p-Nitrotoluene	99990	150	150		50 ug/kg	U	U	
RDX	121824	150	150		50 ug/kg	U	U	
Tetryl	479458	150	150		50 ug/kg	U	U	

*Analysis Method*    8330

**Sample Name**    HZBS0174S001                      **Matrix Type:** Soil                      **Result Type:** Lab Repeat An  
**Lab Sample Name:**    235805004                      **Sample Date:** 8/20/2009 10:35:00 AM                      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,3,5-Trinitrobenzene	99354	150	150		50 ug/kg	U	U	
2,4,6-Trinitrotoluene	118967	150	150		50 ug/kg	U	U	
2,4-Dinitrotoluene	121142	150	150		50 ug/kg	U	U	
2,6-Dinitrotoluene	606202	150	150		50 ug/kg	U	U	
2-Amino-4,6-Dinitrotoluene	35572782	150	150		50 ug/kg	U	U	
4-Amino-2,6-Dinitrotoluene	19406510	150	150		50 ug/kg	U	U	
HMX	2691410	150	150		50 ug/kg	U	U	
m-Dinitrobenzene	99650	150	150		50 ug/kg	U	U	
m-Nitrotoluene	99081	150	150		50 ug/kg	U	U	
Nitrobenzene	98953	150	150		50 ug/kg	U	U	
Nitroglycerin	55630	1000	1000		250 ug/kg	U	U	
o-Nitrotoluene	88722	150	150		50 ug/kg	U	U	
PETN	78115	500	500		82.5 ug/kg	U	U	
p-Nitrotoluene	99990	150	150		50 ug/kg	U	U	
RDX	121824	150	150		50 ug/kg	U	U	
Tetryl	479458	150	150		50 ug/kg	U	U	

*Analysis Method*      8330

**Sample Name**      HZBS0174S002      **Matrix Type:** Soil      **Result Type:** Lab Repeat An  
**Lab Sample Name:** 235805005      **Sample Date:** 8/20/2009 10:56:00 AM      **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,3,5-Trinitrobenzene	99354	150	150		50 ug/kg	U	U	
2,4,6-Trinitrotoluene	118967	150	150		50 ug/kg	U	U	
2,4-Dinitrotoluene	121142	150	150		50 ug/kg	U	U	
2,6-Dinitrotoluene	606202	150	150		50 ug/kg	U	U	
2-Amino-4,6-Dinitrotoluene	35572782	150	150		50 ug/kg	U	U	
4-Amino-2,6-Dinitrotoluene	19406510	150	150		50 ug/kg	U	U	
HMX	2691410	150	150		50 ug/kg	U	U	
m-Dinitrobenzene	99650	150	150		50 ug/kg	U	U	
m-Nitrotoluene	99081	150	150		50 ug/kg	U	U	
Nitrobenzene	98953	150	150		50 ug/kg	U	U	
Nitroglycerin	55630	1000	1000		250 ug/kg	U	U	
o-Nitrotoluene	88722	150	150		50 ug/kg	U	U	
PETN	78115	500	500		82.5 ug/kg	U	U	
p-Nitrotoluene	99990	150	150		50 ug/kg	U	U	
RDX	121824	150	150		50 ug/kg	U	U	
Tetryl	479458	150	150		50 ug/kg	U	U	

# **Chain of Custody and Supporting Documentation**



# CHAIN OF CUSTODY RECORD

COC #:

MVWHMM20090824\_00

Page: 1 of 1

235913

Customer Information		Project Information			Requested Analyses		Instructions/TAT																																																																																																																	
Site:	SSFL	Client Name:	Boeing	Collector:	M. Millman-Barris	Boeing PM:		Legend: Numerical values for analyses equate to turn around time in days H - Hold EH - Extract/Extrude & Hold Note: Values in the cells below are Turn Around Times.																																																																																																																
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009	Contact #:																																																																																																																				
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521	<table border="1"> <thead> <tr> <th>Requested Analyses</th> <th>Date</th> <th>Time</th> <th>No. of Containers</th> <th>Relinquished by:</th> <th>Date:</th> <th>Received by:</th> <th>Date:</th> </tr> </thead> <tbody> <tr> <td>D2216 Moisture Soil</td> <td>5</td> <td>5</td> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dioxin by 1613B - Soil</td> <td>5</td> <td>5</td> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dioxin by 1613B - Water</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Energetics 8330 Water</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Metals 6020 Cu Water</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Metals 6020 Soil Copper</td> <td>5</td> <td>5</td> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Metals 6020 Soil Lead</td> <td>5</td> <td>5</td> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Metals 6020 Water Lead</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Metals by 6010/6020/7470A - Water</td> <td>10</td> <td>10</td> <td>10</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>PCB by SW8082 - Water</td> <td>10</td> <td>10</td> <td>10</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Perchlorate 314 Water DI-WET</td> <td>10</td> <td>10</td> <td>10</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SVOCs by SW8270C SIM - Water</td> <td>10</td> <td>10</td> <td>10</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>VOC by SW8260B - Water</td> <td>10</td> <td>10</td> <td>10</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Requested Analyses	Date	Time	No. of Containers	Relinquished by:	Date:	Received by:	Date:	D2216 Moisture Soil	5	5	5					Dioxin by 1613B - Soil	5	5	5					Dioxin by 1613B - Water								Energetics 8330 Water								Metals 6020 Cu Water								Metals 6020 Soil Copper	5	5	5					Metals 6020 Soil Lead	5	5	5					Metals 6020 Water Lead								Metals by 6010/6020/7470A - Water	10	10	10					PCB by SW8082 - Water	10	10	10					Perchlorate 314 Water DI-WET	10	10	10					SVOCs by SW8270C SIM - Water	10	10	10					VOC by SW8260B - Water	10	10	10				
Requested Analyses	Date	Time	No. of Containers						Relinquished by:	Date:	Received by:	Date:																																																																																																												
D2216 Moisture Soil	5	5	5																																																																																																																					
Dioxin by 1613B - Soil	5	5	5																																																																																																																					
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Metals 6020 Soil Copper	5	5	5																																																																																																																					
Metals 6020 Soil Lead	5	5	5																																																																																																																					
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Metals by 6010/6020/7470A - Water	10	10	10																																																																																																																					
PCB by SW8082 - Water	10	10	10																																																																																																																					
Perchlorate 314 Water DI-WET	10	10	10																																																																																																																					
SVOCs by SW8270C SIM - Water	10	10	10																																																																																																																					
VOC by SW8260B - Water	10	10	10																																																																																																																					
Address:	2121 N. California Blvd Suite 600 Walnut Creek CA 94596	Project Manager:	Alex Fischl (925) 627-4827 Benjamin Stewart (618) 266-1378 GEL Laboratories, LLC																																																																																																																					
Email:	sarah.vonraesfeld@mvhgloba1.c sean.leffler@mvhgloba1.com	Lab Contact:	Jackie Trudell 2040 Savage Road Charleston, SC 29407 (843) 769-7388																																																																																																																					
Sample Name	Matrix	Date	Time	No. of Containers																																																																																																																				
CNBS0137S001	Soil	8/24/2009	13:01	2																																																																																																																				
CNBS0138S001	Soil	8/24/2009	13:14	2																																																																																																																				
EBQW2236	Water	8/24/2009	14:00	3																																																																																																																				
FBQW2239	Water	8/24/2009	14:00	11																																																																																																																				

1. Relinquished by:		2. Received by:		3. Relinquished by:		4. Received by:	
Date:	8/24/09	Date:	8/25/09	Date:		Date:	
Time:	17:00	Time:	8:00	Time:		Time:	
Company:	MWH	Company:	GEL	Company:		Company:	
Signature:	<i>Margaret M. Wilson</i>	Signature:	<i>R.M. Stelling</i>	Signature:		Signature:	
Comments:		Comments:		Comments:		Comments:	

Geotracker EDF

Data Validation Package  Level IV



# SAMPLE RECEIPT & REVIEW FORM

Client: <u>S3 F1</u>		SDG/ARCO/Work Order: <u>235913</u>	
Received By: <u>Rms</u>		Date Received: <u>8/25/09</u>	
<b>Suspected Hazard Information</b>		Yes	No
COC/Samples marked as radioactive?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Classified Radioactive II or III by RSO?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
COC/Samples marked containing PCBs?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipped as a DOT Hazardous?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?		<input type="checkbox"/>	<input checked="" type="checkbox"/>

\*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.

Maximum Counts Observed\*: 20 cpm

Hazard Class Shipped: \_\_\_\_\_ UN#: \_\_\_\_\_

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: seals broken    damaged container    leaking container    other (describe)
2 Samples requiring cold preservation within 0 ≤ 6 deg. C?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>ice bags</u> blue ice    dry ice    none    other (describe) <u>4c</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: seals broken <u>damaged container</u> leaking container    other (describe) <u>received (1) 1L amber IDFB QW2239 broken</u>
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected:
7 Are Encore containers present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments:

Fx: 9457 3161 4126  
   "      "      4115

PM (or PMA) review: Initials JT Date 8/25/09

**Subject:** ISRA Sample Receipt Issues - 8/25/09

**From:** Jackie Trudell <jacqueline.trudell@gel.com>

**Date:** Tue, 25 Aug 2009 11:20:41 -0400

**To:** Sarah E VonRaesfeld <Sarah.E.VonRaesfeld@us.mwhglobal.com>, Sean S Leffler  
<Sean.S.Leffler@us.mwhglobal.com>

Sarah-

We received one 1L Amber container broken for sample FBQW2239. We will have enough volume to proceed with analysis.

Thanks,  
Jackie

--

Jacqueline Trudell  
Project Manager  
GEL Laboratories, LLC  
2040 Savage Road  
Charleston, SC (USA) 29407  
Direct: 843.769.7388  
Main: 843.556.8171 ext. 4406  
Fax: 843.766.1178  
E-mail: [jacqueline.trudell@gel.com](mailto:jacqueline.trudell@gel.com)  
Web: [www.gel.com](http://www.gel.com)

## LABORATORY TASK ORDER (LTO) FORM

*INSTRUCTIONS: To be completed by Environmental Contractor & Emailed to Laboratory Project Manager, CH2M HILL (boeingdms@ch2m.com) & the Data Validator at Least 48 hrs prior to need for sample containers. Project Analytical Laboratory will confirm receipt via E-Mail.*

**Event Name:** ISRA Sampling, Feb 2009

**Start:** 2/19/2009

**End:** 2/23/2009

**LTO DATE:**

**LTO NUMBER:**

<p><b>Consultant Name:</b> MWH  <b>Address:</b> 2121 N. California Blvd. Ste. 600          Walnut Creek, CA 94596</p> <p><b>Contact Name:</b> Sarah Von Raesfeld  <b>Phone Number:</b> 925-627-4654  <b>Fax Number:</b> 925-627-4501  <b>E-mail Address:</b> <a href="mailto:Sarah.VonRaesfeld@mwhglobal.com">Sarah.VonRaesfeld@mwhglobal.com</a></p>	<p><b>Contract Laboratory:</b> GEL  <b>Address:</b> 2040 Savage Rd.          Charleston, SC 29407</p> <p><b>Lab Contact Name:</b> Cheryl Jones  <b>Phone Number:</b> 843-769-7388  <b>Fax Number:</b> 843-766-1178  <b>E-mail Address:</b> <a href="mailto:cj@gel.com">cj@gel.com</a></p>
---	---

### SAMPLE CONTAINER ORDER FORM

**Date Required:** 02/19/09

**Requested Analyses:** (Specify # of Samples)

**Date Sample Pickup:** NA

**Ship Containers To:**  
 Project Site  (enter "X")  
 Consultant Office  (enter "X")  
 Other Location (specify in comments)  (enter "X")

**Container Information:**  
 Trip Blank (VOA only)  Yes (Yes/No)  
 Temp Blank (VOA Only)  No (Yes/No)  
 DI Water Required?  No (Yes/No)  
 MS/MSD Extra Bottles?  No (Yes/No)

**Sample Matrix:**  
 Soil  (select all applicable)  
 Water  (select all applicable)  
 Vapor  (select all applicable)

Est. Total # of Samples: 75      Est. Total # of EDDs: 5

	Water	Soil	Contingent
<b>Dioxins - (1613B)</b>	<b>5</b>	<b>9</b>	<b>14</b>
EPA 8015M (DRO)	--	--	--
EPA 8015M (JET FUEL)	--	--	--
EPA 8015M (CC)	--	--	--
EPA 8260B (VOC)	--	--	--
EPA 8270C SIM (SVOC)	--	--	--
EPA 8310 (PAH)	--	--	--
EPA 8082 (PCB)	--	--	--
Acetone (8260B)	--	--	--
EPA TO-15 VOCs (SIM)	--	--	--
Metals (6010B/6020/7470A/7471A)	--	--	--
<b>Cadmium (6020)</b>	<b>5</b>	<b>15</b>	<b>10</b>
<b>Arsenic (6020)</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>% Moisture (D2216)</b>	<b>0</b>	<b>40</b>	<b>30</b>
<b>Lead (6020)</b>	<b>5</b>	<b>40</b>	<b>30</b>
<b>Copper (6020)</b>	<b>5</b>	<b>10</b>	<b>5</b>
<b>Zinc (6020)</b>	<b>5</b>	<b>10</b>	<b>5</b>
EPA TO-14 (VOCs)	--	--	--

### LABORATORY REPORTING REQUIREMENTS

**Project TAT:**  
 Normal:  (10 Business days)  
 RUSH:  (Specify- 24 / 48 / 72HRS)  
 Other:  (Specify # of Days)  
 Report Due Date: \_\_\_\_\_

**Laboratory Results/Reports Deliverables:**  
 Draft Results Fax?:  (Yes/No)  
 Draft Results E-mail?:  Yes (Yes/No)  
 Specify Fax/E-mail Contact  
 Name, #, E-mail Address: [Sarah.VonRaesfeld@mwhglobal.com](mailto:Sarah.VonRaesfeld@mwhglobal.com)  
 Send Original Reports To:

**Special Reporting Requirements:**  
 Contingent Analysis?  No (Yes/No)  
 TIC (VOC) Required?  No (Yes/No)  
 TIC (SVOC) Required?  No (Yes/No)  
 Data Validation Pckge.: Tier III (Boeing Tier I, II or III)

Project Site  (enter "X")  
 Consultant Office  (enter "X")  
 Other Location (specify in comments)  (enter "X")  
 # of Copies Reports Req.: 1

### SPECIAL INSTRUCTIONS/LTO NOTES

### CONFIRMATION OF TRANSMITTAL & RECEIPT

**LTO Sent By:**  
 Name: Sean Leffler  
 Date: 02/20/09

**LTO Received By:**  
 Name: \_\_\_\_\_  
 Date: \_\_\_\_\_

## LABORATORY TASK ORDER (LTO) FORM (PAGE 2)

### ADDITIONAL REQUIRED ANALYSES

LTO DATE:

LTO NUMBER:

**Consultant Name:** MWH  
**Address:** 2121 N. California Blvd. Ste. 600  
Walnut Creek, CA 94596

**Contract Laboratory:** GEL  
**Address:** 2040 Savage Rd.  
Charleston, SC 29407

**Contact Name:** Sarah Von Raesfeld  
**Phone Number:** 925-627-4654  
**Fax Number:** 925-627-4501  
**E-mail Address:** [Sarah.VonRaesfeld@mwhglobal.com](mailto:Sarah.VonRaesfeld@mwhglobal.com)

**Lab Contact Name:** Cheryl Jones  
**Phone Number:** 843-769-7388  
**Fax Number:** 843-766-1178  
**E-mail Address:** [cj@gel.com](mailto:cj@gel.com)

### SAMPLE CONTAINER ORDER FORM (CONTINUED)

**Requested Analyses:** (Specify # of Samples)

	Water	Soil	Contingent
Arsenic (6020)	--	--	--
Lead (6020)	--	--	--
Cadmium (6020)	--	--	--
Lithium (6020)	--	--	--
Sodium (6020)	--	--	--
Selenium (6020)	--	--	--
Thallium (6020)	--	--	--
Zinc (6020)	--	--	--
Boron (6010B)	--	--	--
Vanadium (6010B)	--	--	--
Copper (6020)	--	--	--
Zirconium (6020)	--	--	--

1 of 2 coolers

**BOEING**

### CHAIN OF CUSTODY RECORD

COC #:

235913

MWHMM20090824\_00

Page: 1 of 1

Customer Information		Project Information			
Site: SSFL	Client Name: Boeing	Collector: M. Milman-Barris	Boeing PM:		
Company: MWH	Sampling Event: ISRA Sampling, June 2009	Contact #:			
Report to: Sarah Von Raesfeld	Project Number: 1991614.054521	Requested Analyses			
Address: 2121 N. California Blvd	Project Manager: Alex Fischl	Metals by 6010/6020/7470A - Water			
Suite 600	PM Phone #: (925) 627-4627	Metals 6020 Water Lead			
Walnut Creek	Field Contact: Benjamin Stewart	Metals 6020 Soil Lead			
CA	Field Contact #: (818) 266-1378	Metals 6020 Soil Copper			
94596	Lab Name: GEL Laboratories, LLC	Metals 6020 Cu Water			
Email: sarah.vonraesfeld@mwhglobal.com	Lab Contact: Jackie Trudell	Energetics 8330 Water			
sean.leffler@mwhglobal.com	Lab Address: 2040 Savage Road	Dioxin by 1613B - Water			
	Charleston, SC 29407	Dioxin by 1613B - Soil			
	Lab Phone: (843) 769-7388	D2216 Moisture Soil			
		PCB by SW8082 - Water			
		Perchlorate 314 Water DI-WET			
		SVOCs by SW8270C SIM - Water			
		VOC by SW8260B - Water			
Sample Name	Matrix	Date	Time	No. of Containers	Instructions/TAT
CNBS0137S001	Soil	8/24/2009	13:01	2	Legend: Numerical values for analyses equate to turn around time in days H - Hold EH - Extract/Extrude & Hold Note: Values in the cells below are Turn Around Times.
CNBS0138S001	Soil	8/24/2009	13:14	2	
EBQW2236	Water	8/24/2009	14:00	3	
FBQW2239	Water	8/24/2009	14:00	11	

WO # 1044

2nd cooler  
1st cooler

1. Relinquished by:		2. Received by:		3. Relinquished by:		4. Received by:	
Marquett. Walker	Date: 8/24/09	R.M. Stelling	Date: 8/25/09	R.M. Stelling	Date: 8/25/09	Chafar	Date: 9/4/09
Company: MWH	Time: 17:00	Company: GEL	Time: 8:00	Company: GEL	Time: 17:00	Company: CFA	Time: 9:40
Comments: PH = 7.0 (water) coolw temp 3.5 No residual							
<input type="checkbox"/> Geotracker EDF <input checked="" type="checkbox"/> Data Validation Package <input type="checkbox"/> Level IV							

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# **Case Narrative**

**Case Narrative  
for  
Boeing - SSFL (MWH)  
Work Order: 235913  
SDG: 235913**

**September 03, 2009**

**Laboratory Identification:**

GEL Laboratories LLC  
2040 Savage Road  
Charleston, South Carolina 29407  
(843) 556-8171

**Summary:**

**Sample Receipt**

The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on August 25, 2009 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

The laboratory received the following samples:

<b><u>Laboratory Identification</u></b>	<b><u>Sample Description</u></b>
235913001	CNBS0137S001
235913002	CNBS0138S001
235913003	EBQW2236
235913004	FBQW2239

**Items of Note**

Santa Susanna Field Laboratory Technical Representative was contacted seeking resolution to any analytical and/or receipt issues. Please see the enclosed e-mails.

**Case Narrative**

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

**Data Package:**

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Explosives by LCMSMS, GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, HPLC Explosive, Metals, Percent Moisture and Dioxins (Cape Fear Analytical).

I certify that this data package is in compliance with the terms and conditions of the subcontract and task order, both technically and for the completeness, for other than the conditions detailed in the attached case narratives.

A handwritten signature in black ink that reads "Jacqueline A. Trudell". The signature is written in a cursive style with a large initial 'J' and 'T'.

Jacqueline Trudell

Project Manager

ORIGIN ID: CHSA  
SAMPLE RECEIVING  
GEL LABORATORIES, LLC  
2040 SAVAGE RD.

25AUG09  
ACTWGT: 22.2 LB  
CAD: 0078060/CAFE2431

CHARLESTON, SC 29407  
UNITED STATES US

BILL SENDER

TO CHRIS CORNWELL  
CAPE FEAR ANALYTICAL, LLC  
3306 KITTY HAWK ROAD, STE 120

WILMINGTON NC 28405

(010) 305 8101

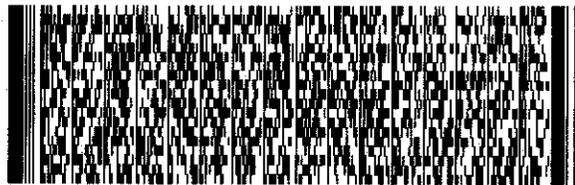
(010) 705-0134

(010) 938-0432

(010) 100-042



DEPT: CHEMISTRY LAB - 28100



FedEx  
Express



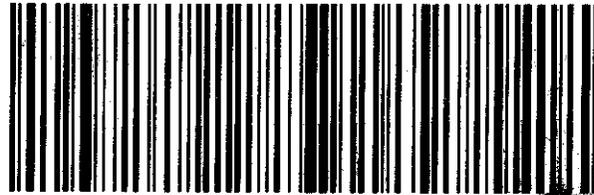
CS611061222224

WED - 26AUG AA  
PRIORITY OVERNIGHT

TRK# 9457 3163 1611  
0201

XH ILMA

28405  
NC-US  
GSO



250-354 TRIT 12/08

**SAMPLE RECEIPT CHECKLIST**

Client: <b>GEL</b>	Work Order:
Received By: <b>Chris Cornwell</b>	Date Received: <b>8/26/09</b>

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	/	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: seals broken    damaged container    leaking container    other(describe)
2 Samples requiring cold preservation within 0-6°C?	/	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: ice bags    blue ice    dry ice    none    other (describe) <b>3.9</b>
3 Chain of Custody documents included with shipment?	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4 Samples requiring chemical preservation at proper pH?	/	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected and pH observed:  If preservative added, Lot#:
5 VOA vials free of headspace <6mm bubble?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
6 Are Encore containers present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(If YES, immediately deliver to volatiles laboratory)
7 Samples received within holding time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, tests affected:
8 Sample IDs on COC match IDs on containers?	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
9 Date & time of COC match date & time on containers?	/	<input type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
10 Number of containers received match number indicated on COC?	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample IDs, containers affected:
11 COC form is properly signed in relinquished/received sections?	/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Comments: **No residual chlorine present.**

PM review: Initials: \_\_\_\_\_ Date: \_\_\_\_\_

# **High Resolution Dioxin and Furan Analysis Analysis**

# Case Narrative

**HDOX Case Narrative  
Boeing (BOEN)  
SDG 1044**

**Method/Analysis Information**

**Product:** Dioxins/Furans by EPA Method 1613B in Solids  
Analytical Method: EPA Method 1613B  
Extraction Method: SW846 3540C  
Analytical Batch Number: 1372, 1453  
Clean Up Batch Number: 1433, 1312  
Extraction Batch Number: 1253, 1393

**Sample Analysis**

The following samples were analyzed using the analytical protocol as established in EPA Method 1613B:

<b>Sample ID</b>	<b>Client ID</b>
1044001	CNBS0137S001
1044002	CNBS0138S001
1044003	EBQW2236
12000207	Method Blank (MB)
12000208	1044001(CNBS0137S001) Matrix Spike (MS)
12000209	1044001(CNBS0137S001) Matrix Spike Duplicate (MSD)
12000210	Laboratory Control Sample (LCS)
12000211	Laboratory Control Sample Duplicate (LCSD)
12000232	Method Blank (MB)
12000233	Laboratory Control Sample (LCS)
12000234	Laboratory Control Sample Duplicate (LCSD)

Samples 1044 001 and 002 in this SDG were analyzed on an "dry weight" basis. Samples 1044 003 in this SDG were analyzed on a "as received" basis.

**Preparation/Analytical Method Verification**

**SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 2.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

**Calibration Information**

**Initial Calibration**

All initial calibration requirements have been met for this sample delivery group (SDG).

### **Continuing Calibration Verification (CCV) Requirements**

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

### **Quality Control (QC) Information**

#### **Method Blank (MB) Statement**

The MB(s) analyzed with this SDG met the acceptance criteria.

#### **Surrogate Recoveries**

All surrogate recoveries were within the established acceptance criteria for this SDG.

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

#### **Laboratory Control Sample Duplicate (LCSD) Recovery**

The LCSD spike recoveries met the acceptance limits.

#### **QC Sample Designation**

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

#### **Matrix Spike (MS) Recovery Statement**

The MS recoveries were within the established acceptance limits.

#### **Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recoveries were within the established acceptance limits.

#### **MS/MSD Relative Percent Difference (RPD) Statement**

The RPD(s) between the MS and MSD met the acceptance limits.

### **Technical Information**

#### **Holding Time Specifications**

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

#### **Sample Dilutions**

The samples in this SDG did not require dilutions.

#### **Sample Re-extraction/Re-analysis**

Sample were re-analyzed to confirm 2,3,7,8-TCDF concentration. 1044001 (CNBS0137S001), 1044002 (CNBS0138S001), 12000208 (CNBS0137S001) and 12000209 (CNBS0137S001)- Batch 1372.

### **Miscellaneous Information**

#### **Nonconformance (NCR) Documentation**

A NCR was not required for this SDG.

**Manual Integrations**

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were not required for any data file in this SDG.

**Additional Comments**

No additional comments needed

**System Configuration**

This analysis was performed on a Waters Autospec Premier high-resolution GC/MS system.



# DATA VALIDATION REPORT

Boeing SSFL RFI ISRA

SAMPLE DELIVERY GROUP: 235913

Prepared by

MEC<sup>x</sup>, LP  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI ISRA  
 Contract Task Order: 1261.500D.00  
 Sample Delivery Group: 235913  
 Project Manager: Dixie Hambrick  
 Matrix: water/soil  
 QC Level: V  
 No. of Samples: 4  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: GEL

**Table 1. Sample Identification**

<i>Sample Name</i>	<i>Lab Sample Name</i>	<i>Sub-Lab Sample Name</i>	<i>Matrix</i>	<i>Collection</i>	<i>Method</i>
CNBS0137S001	235913001	1044001	Soil	8/24/2009 1:01:00 PM	1613B, 6020
CNBS0138S001	235913002	1044002	Soil	8/24/2009 1:14:00 PM	1613B, 6020
EBQW2236	235913003	1044003	Water	8/24/2009 2:00:00 PM	1613B, 6020
FBQW2239	235913004	N/A	Water	8/24/2009 2:00:00 PM	314, 6010B, 6020, 7470A, 8082, 8260B, 8270C, 8321A, 8330

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.

### Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
T-I	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents a compound with a CAS number and fit greater than 80%.	Not applicable

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T-II	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents a class of compound but not of sufficient identification quality to represent a specific compound.	Not applicable
T-III	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents an unknown compound.	Not applicable
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

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### Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

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**Qualification Code Reference Table Cont.**

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

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### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: P. Meeks

Date Reviewed: September 11, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review (08/02)*.

- Holding Times: Extraction and analytical holding times were met. The samples were extracted and analyzed within one year of collection.
- Instrument Performance: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The soil method blank had 18 detects below the reporting limit and the aqueous method blank had 11 detects below the reporting limit. 2,3,4,7,8-PeCDF and 1,2,3,4,6,7,8-HpCDF were qualified as nondetected, "U," at the EDL in EBQW2236. The following compounds were qualified as nondetected, "U," at the EDL or the level of contamination in CNBS0137S001: 1,2,3,7,8,9-HxCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, OCDF, 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, and 2,3,4,7,8-PeCDF. The following compounds were qualified as nondetected, "U," at the EDL in CNBS0138S001: 1,2,3,4,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, OCDF, and 2,3,7,8-TCDF. As a portion of the totals were represented by the qualified compounds, totals were also qualified as estimated, "J."
- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613. The RPDs were within the laboratory-established control limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: EBQW2236 was the equipment rinsate associated with the samples in this SDG. 2,3,4,6,7,8-HxCDF was detected in EBQW2236 at 0.857 pg/L, but was not reportable in the site soil samples. The samples in this SDG had no identified field blank.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

- **Internal Standards Performance:** Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- **Compound Identification:** Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The laboratory performed a confirmation analyses for 2,3,7,8-TCDF and reported the confirmation results. As the confirmation results yielded results similar to the initial results, the confirmation results were rejected, "R," in favor of the initial results.
- **Compound Quantification and Reported Detection Limits:** Review is not applicable at a Level V validation. Estimated maximum possible concentrations (EMPCs) were identified in the sample of this SDG, as denoted by the laboratory "K," code. For individual isomers identified as EMPCs, the results were qualified as estimated nondetects, "UJ." EMPCs reported as totals were qualified as estimated, "J," as only a portion of the total was identified as an EMPC. The laboratory calculated and reported compound-specific detection limits. Any detect below the laboratory lower calibration level was qualified as estimated, "J." Nondetects are valid to the estimated detection limit (EDL).

## B. EPA METHOD 8330—Energetics

Reviewed By: P. Meeks

Date Reviewed: September 11, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Explosives, Nitroaromatics, and Nitramines (DVP-16, Rev. 0)*, *EPA Method 8330*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- **Holding Times:** Extraction and analytical holding times were met. The water sample was extracted within seven days of collection and analyzed within 40 days of extraction.
- **Calibration:** Review is not applicable at a Level V validation.
- **Blanks:** The method blank had no target compound detects above the MDL.
- **Blank Spikes and Laboratory Control Samples:** Recoveries were within laboratory-established QC limits.
- **Surrogate Recovery:** Recoveries were within laboratory-established QC limits.
- **Matrix Spike/Matrix Spike Duplicate:** MS/MSD analyses were not performed on a sample from this SDG. Evaluation of method accuracy was based on the blank spike results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: The sample in this SDG was identified as a field blank. There were no detects in the sample.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for energetic compounds by Method 8330.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

### **C. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury**

Reviewed By: P. Meeks

Date Reviewed: September 11, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Antimony was detected in the aqueous method blank at 9.91 µg/L; therefore, antimony detected in FBQW2239 was qualified as nondetected, "U," at the reporting limit. Method blanks and CCBs had no other applicable detects.
- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries and the aqueous RPDs were within laboratory-established QC limits.
- Laboratory Duplicates: Laboratory duplicate analyses were performed on CNBS0137S001. The RPDs were within the laboratory-established control limit.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on CNBS0137S001. Recoveries and RPDs were within laboratory-established QC limits.
- Serial Dilution: Serial dilution analyses were performed on EBQW2236 for the 6020 analytes, on FBQW2239 for all analytes, and on CNBS0137S001. All %Ds were within method-established QC limits
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Sample Result Verification: Review is not applicable at a Level V validation. As the samples in this SDG were validated at Level V, the QC information necessary to make an absolute determination of bias in the samples was not reviewed; therefore, when qualifications were applied, no bias was assigned. Lead in the soil samples were reported from the laboratory's standard 2x dilution and due to matrix interference copper in the soil samples was reported from a 10x dilution. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: FBQW2239 was the field blank and EBQW2236 was the equipment rinsate associated with the soil samples in this SDG. There were no applicable detects in either field QC sample.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

#### **D. EPA METHOD 8270C—Polynuclear Aromatic Hydrocarbons (PAHs)**

Reviewed By: P. Meeks

Date Reviewed: September 11, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and analyzed within 40 days of extraction.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.

- Blanks: Bis(2-ethylhexyl)phthalate was detected in the method blank at 0.323 µg/L; therefore, the detect for this compound in FBQW2239 was qualified as nondetected, “U,” at the reporting limit. The method blank had no other target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a sample from this SDG. Evaluation of method accuracy was based on the blank spike results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: The sample in this SDG was identified as a field blank. There were no reportable detects in FBQW2239.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for PAH compounds and added phthalates by Method 8270C low-level.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, “J.” Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System performance: System performance is not evaluated at a Level V validation.

#### **E. EPA METHOD 314.0—Perchlorate**

Reviewed By: P. Meeks

Date Reviewed: September 11, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-20, Rev. 0)*, *EPA Method 314.0*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: The analytical holding time, 28 days, was met.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: the method blank and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: the recovery was within the method-established QC limits of 85-115%.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No matrix spike analysis was performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.
- Sample Result Verification: The sample result reported on the sample result summary was verified against the raw data. No transcription errors or calculation errors were noted. Reported nondetects are valid to the reporting limit.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: The sample in this SDG was identified as a field blank. Perchlorate was not detected in FBQW2239
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

## F. EPA METHOD 8082—PCBs

Reviewed By: P. Meeks

Date Reviewed: September 11, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0)*, *EPA Method 8082*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within 14 days of collection and analyzed within 40 days of extraction.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The method blank had no target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: The recovery was within laboratory-established QC limits.
- Surrogate Recovery: The recovery was within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a sample from this SDG. Evaluation of method accuracy was based on the blank spike results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: The sample in this SDG was identified as a field blank. There were no detects above the MDL in FBQW2239.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for Aroclors by Method 8082.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

## **G. EPA METHOD 8260B—Volatile Organic Compounds (VOCs)**

Reviewed By: P. Meeks

Date Reviewed: September 11, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 8260B*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Analytical holding times were met. The aqueous sample was analyzed within 14 days of collection.
- GC/MS Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.

- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a sample from this SDG. Evaluation of method accuracy was based on the blank spike results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Trip Blanks: This SDG had no identified trip blank.
  - Field Blanks and Equipment Rinsates: The sample in this SDG was identified as a field blank. There were no detects above the MDL in FBQW2239.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for volatile target compounds by Method 8260B.
- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System Performance: Review is not applicable at a Level V validation.

# Validated Sample Result Forms: 235913

## Analysis Method 1613B

Sample Name	CNBS0137S001	Matrix Type:	Soil	Result Type:	Primary			
Lab Sample Name:	1044001	Sample	8/24/2009 1:01:00 PM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822469	2.81	2.26	0.174	pg/g			
1,2,3,4,6,7,8-HpCDF	67562394	2.26	2.26	2.26	pg/g	J	U	B, result changed from 0.685 and EDL from
1,2,3,4,7,8,9-HpCDF	55673897	0.124	2.26	0.124	pg/g	U	U	
1,2,3,4,7,8-HxCDD	39227286	2.26	2.26	2.26	pg/g	JK	UJ	*III, result changed from 0.168 and
1,2,3,4,7,8-HxCDF	70648269	2.26	2.26	2.26	pg/g	J	U	B, result changed from 0.304 and EDL from
1,2,3,6,7,8-HxCDD	57653857	0.103	2.26	0.103	pg/g	U	U	
1,2,3,6,7,8-HxCDF	57117449	2.26	2.26	2.26	pg/g	J	U	B, result changed from 0.116 and EDL from
1,2,3,7,8,9-HxCDD	19408743	2.26	2.26	2.26	pg/g	J	U	B, result changed from 0.132 and EDL from
1,2,3,7,8,9-HxCDF	72918219	0.0902	2.26	0.0902	pg/g	U	U	
1,2,3,7,8-PeCDD	40321764	0.0913	2.26	0.0913	pg/g	U	U	
1,2,3,7,8-PeCDF	57117416	2.26	2.26	2.26	pg/g	J	U	B, result changed from 0.601 and EDL from
2,3,4,6,7,8-HxCDF	60851345	2.26	2.26	2.26	pg/g	JK	UJ	*III, result changed from 0.134 and
2,3,4,7,8-PeCDF	57117314	2.26	2.26	2.26	pg/g	J	U	B, result changed from 0.196 and EDL from
2,3,7,8-TCDD	1746016	0.083	0.453	0.083	pg/g	U	U	

*Analysis Method*      *1613B*

2,3,7,8-TCDF	51207319	0.453	0.453	0.453 pg/g		U	B, RL changed from 0.453 and EDL from
2,3,7,8-TCDF	51207319	0.404	0.453	0.119 pg/g	J	R	D
OCDD	3268879	34.9	4.53	0.219 pg/g			
OCDF	39001020	4.53	4.53	4.53 pg/g	J	U	B, result changed from 2.4 and EDL from
Total HpCDD	37871004	9.25	2.26	0.174 pg/g			
Total HpCDF	38998753	1.8	2.26	0.0759 pg/g	J	J	B
Total HxCDD	34465468	1.29	2.26	0.0964 pg/g	J	J	*III, B
Total HxCDF	55684941	1.78	2.26	0.0621 pg/g	J	J	*III, B
Total PeCDD	36088229	0.375	2.26	0.0913 pg/g	J	J	
Total PeCDF	30402154	3.97	2.26	0.0464 pg/g		J	B
Total TCDD	41903575	0.17	0.453	0.083 pg/g	J	J	
Total TCDFs	55722275	2.48	0.453	0.161 pg/g	B	J	B

## Analysis Method 1613B

Sample Name	CNBS0138S001	Matrix Type:	Soil	Result Type:	Primary			
Lab Sample Name:	1044002	Sample	8/24/2009 1:14:00 PM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822469	0.297	2.08	0.098	pg/g	J	J	
1,2,3,4,6,7,8-HpCDF	67562394	2.08	2.08	2.08	pg/g	J	U	B, result changed from 0.214 and EDL from
1,2,3,4,7,8,9-HpCDF	55673897	2.08	2.08	2.08	pg/g	JK	UJ	*III, result changed from 0.194 and
1,2,3,4,7,8-HxCDD	39227286	2.08	2.08	2.08	pg/g	J	U	B, result changed from 0.214 and EDL from
1,2,3,4,7,8-HxCDF	70648269	2.08	2.08	2.08	pg/g	J	U	B, result changed from 0.189 and EDL from
1,2,3,6,7,8-HxCDD	57653857	0.183	2.08	0.0646	pg/g	J	J	
1,2,3,6,7,8-HxCDF	57117449	2.08	2.08	2.08	pg/g	J	U	B, result changed from 0.196 and EDL from
1,2,3,7,8,9-HxCDD	19408743	2.08	2.08	2.08	pg/g	J	U	B, result changed from 0.204 and EDL from
1,2,3,7,8,9-HxCDF	72918219	2.08	2.08	2.08	pg/g	JK	UJ	*III, result changed from 0.206 and
1,2,3,7,8-PeCDD	40321764	0.194	2.08	0.0503	pg/g	J	J	
1,2,3,7,8-PeCDF	57117416	0.224	2.08	0.0425	pg/g	JK	J	*III
2,3,4,6,7,8-HxCDF	60851345	2.08	2.08	2.08	pg/g	J	U	B, result changed from 0.213 and EDL from
2,3,4,7,8-PeCDF	57117314	2.08	2.08	2.08	pg/g	JK	UJ	*III, result changed from 0.218 and

*Analysis Method*      *1613B*

2,3,7,8-TCDD	1746016	0.0543	0.415	0.0543	pg/g	U	U	
2,3,7,8-TCDF	51207319	0.415	0.415	0.415	pg/g	J	U	B, result changed from 0.33 and EDL from 0.06
2,3,7,8-TCDF	51207319	0.34	0.415	0.131	pg/g	J	R	D
OCDD	3268879	4.15	4.15	4.15	pg/g	JK	UJ	*III, result changed from 0.87 and EDL
OCDF	39001020	4.15	4.15	4.15	pg/g	J	U	B, result changed from 0.576 and EDL from
Total HpCDD	37871004	0.424	2.08	0.098	pg/g	J	J	
Total HpCDF	38998753	0.409	2.08	0.0616	pg/g	J	J	*III, B
Total HxCDD	34465468	0.601	2.08	0.06	pg/g	J	J	B
Total HxCDF	55684941	0.804	2.08	0.038	pg/g	J	J	*III, B
Total PeCDD	36088229	0.194	2.08	0.0503	pg/g	J	J	
Total PeCDF	30402154	0.442	2.08	0.0264	pg/g	J	J	*III
Total TCDD	41903575	0.0731	0.415	0.0543	pg/g	J	J	
Total TCDFs	55722275	0.879	0.415	0.06	pg/g	B	J	B

# Analysis Method 1613B

Sample Name	EBQW2236	Matrix Type:	Water	Result Type:	Primary			
Lab Sample Name:	1044003	Sample	8/24/2009 2:00:00 PM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822469	1.4	23.8		1.4 pg/L	U	U	
1,2,3,4,6,7,8-HpCDF	67562394	23.8	23.8		23.8 pg/L	J	U	B, result changed from 0.838 and EDL from
1,2,3,4,7,8,9-HpCDF	55673897	1.29	23.8		1.29 pg/L	U	U	
1,2,3,4,7,8-HxCDD	39227286	1.02	23.8		1.02 pg/L	U	U	
1,2,3,4,7,8-HxCDF	70648269	0.688	23.8		0.688 pg/L	U	U	
1,2,3,6,7,8-HxCDD	57653857	1.13	23.8		1.13 pg/L	U	U	
1,2,3,6,7,8-HxCDF	57117449	0.743	23.8		0.743 pg/L	U	U	
1,2,3,7,8,9-HxCDD	19408743	1.13	23.8		1.13 pg/L	U	U	
1,2,3,7,8,9-HxCDF	72918219	0.911	23.8		0.911 pg/L	U	U	
1,2,3,7,8-PeCDD	40321764	0.852	23.8		0.852 pg/L	U	U	
1,2,3,7,8-PeCDF	57117416	0.876	23.8		0.876 pg/L	U	U	
2,3,4,6,7,8-HxCDF	60851345	0.8	23.8		0.718 pg/L	J	J	
2,3,4,7,8-PeCDF	57117314	23.8	23.8		23.8 pg/L	J	U	B, result changed from 0.724 and EDL from
2,3,7,8-TCDD	1746016	0.943	4.76		0.943 pg/L	U	U	
2,3,7,8-TCDF	51207319	1.09	4.76		1.09 pg/L	U	U	
OCDD	3268879	2.17	47.6		2.17 pg/L	U	U	
OCDF	39001020	2.27	47.6		2.27 pg/L	U	U	
Total HpCDD	37871004	1.4	23.8		1.4 pg/L	U	U	
Total HpCDF	38998753	0.838	23.8		0.81 pg/L	J	J	
Total HxCDD	34465468	1.02	23.8		1.02 pg/L	U	U	
Total HxCDF	55684941	1.54	23.8		0.688 pg/L	J	J	
Total PeCDD	36088229	0.852	23.8		0.852 pg/L	U	U	
Total PeCDF	30402154	1.6	23.8		0.564 pg/L	J	J	
Total TCDD	41903575	0.943	4.76		0.943 pg/L	U	U	
Total TCDFs	55722275	1.09	4.76		1.09 pg/L	U	U	

*Analysis Method 314.0-DI WET*

<b>Sample Name</b>	FBQW2239	<b>Matrix Type:</b>	Water	<b>Result Type:</b>	Primary			
<b>Lab Sample Name:</b>	235913004	<b>Sample</b>	8/24/2009 2:00:00 PM	<b>Validation</b>	V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
Perchlorate	14797730	4	4		1 ug/L	U	U	

*Analysis Method 6010B*

<b>Sample Name</b>	FBQW2239	<b>Matrix Type:</b>	Water	<b>Result Type:</b>	Primary			
<b>Lab Sample Name:</b>	235913004	<b>Sample</b>	8/24/2009 2:00:00 PM	<b>Validation</b>	V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
Aluminum	7429905	68	200		68 ug/L	U	U	
Antimony	7440360	10	10		10 ug/L	J	U	B, result changed from 4.7 and MDL
Boron	7440428	15	50		15 ug/L	U	U	

*Analysis Method 6020*

<b>Sample Name</b>	CNBS0137S001	<b>Matrix Type:</b>	Soil	<b>Result Type:</b>	Primary			
<b>Lab Sample Name:</b>	235913001	<b>Sample</b>	8/24/2009 1:01:00 PM	<b>Validation</b>	V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
Copper	7440508	8.23	1.01	0.333	mg/kg			
Lead	7439921	9.57	0.404	0.101	mg/kg			
<b>Sample Name</b>	CNBS0138S001	<b>Matrix Type:</b>	Soil	<b>Result Type:</b>	Primary			
<b>Lab Sample Name:</b>	235913002	<b>Sample</b>	8/24/2009 1:14:00 PM	<b>Validation</b>	V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
Copper	7440508	11.3	1.02	0.336	mg/kg			
Lead	7439921	7.19	0.407	0.102	mg/kg			
<b>Sample Name</b>	EBQW2236	<b>Matrix Type:</b>	Water	<b>Result Type:</b>	Primary			
<b>Lab Sample Name:</b>	235913003	<b>Sample</b>	8/24/2009 2:00:00 PM	<b>Validation</b>	V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
Copper	7440508	1.09	1	0.33	ug/L			
Lead	7439921	0.5	2	0.5	ug/L	U	U	
<b>Sample Name</b>	FBQW2239	<b>Matrix Type:</b>	Water	<b>Result Type:</b>	Primary			
<b>Lab Sample Name:</b>	235913004	<b>Sample</b>	8/24/2009 2:00:00 PM	<b>Validation</b>	V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
Arsenic	7440382	1.6	5	1.6	ug/L	U	U	
Barium	7440393	0.6	2	0.6	ug/L	U	U	
Beryllium	7440417	0.1	0.5	0.1	ug/L	U	U	
Cadmium	7440439	0.11	1	0.11	ug/L	U	U	
Chromium	7440473	2	10	2	ug/L	U	U	
Cobalt	7440484	0.1	1	0.1	ug/L	U	U	
Copper	7440508	0.33	1	0.33	ug/L	U	U	
Lead	7439921	0.5	2	0.5	ug/L	U	U	
Molybdenum	7439987	0.167	0.5	0.167	ug/L	U	U	
Nickel	7440020	0.5	2	0.5	ug/L	U	U	
Selenium	7782492	1	5	1	ug/L	U	U	
Silver	7440224	0.2	1	0.2	ug/L	U	U	
Thallium	7440280	0.3	1	0.3	ug/L	U	U	
Vanadium	7440622	3	10	3	ug/L	U	U	
Zinc	7440666	3	10	3	ug/L	U	U	

*Analysis Method* 7470A

<b>Sample Name</b>	FBQW2239	<b>Matrix Type:</b>	Water	<b>Result Type:</b>	Primary			
<b>Lab Sample Name:</b>	235913004	<b>Sample</b>	8/24/2009 2:00:00 PM	<b>Validation</b>	V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
Mercury	7439976	0.066	0.2	0.066	ug/L	U	U	

*Analysis Method* 8082

<b>Sample Name</b>	FBQW2239	<b>Matrix Type:</b>	Water	<b>Result Type:</b>	Primary			
<b>Lab Sample Name:</b>	235913004	<b>Sample</b>	8/24/2009 2:00:00 PM	<b>Validation</b>	V			
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
Aroclor-1016	12674112	0.0952	0.0952	0.0317	ug/L	U	U	
Aroclor-1221	11104282	0.0952	0.0952	0.0317	ug/L	U	U	
Aroclor-1232	11141165	0.0952	0.0952	0.0317	ug/L	U	U	
Aroclor-1242	53469219	0.0952	0.0952	0.0317	ug/L	U	U	
Aroclor-1248	12672296	0.0952	0.0952	0.0317	ug/L	U	U	
Aroclor-1254	11097691	0.0952	0.0952	0.0317	ug/L	U	U	
Aroclor-1260	11096825	0.0952	0.0952	0.0317	ug/L	U	U	

# Analysis Method 8260B

Sample Name	FBQW2239	Matrix Type:	Water	Result Type:	Primary			
Lab Sample Name:	235913004	Sample	8/24/2009 2:00:00 PM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1	1		0.3 ug/L	U	U	
1,1,1-Trichloroethane	71556	1	1		0.325 ug/L	U	U	
1,1,2,2-Tetrachloroethane	79345	1	1		0.25 ug/L	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	5	5		1 ug/L	U	U	
1,1,2-Trichloroethane	79005	1	1		0.25 ug/L	U	U	
1,1-Dichloroethane	75343	1	1		0.3 ug/L	U	U	
1,1-Dichloroethene	75354	1	1		0.3 ug/L	U	U	
1,1-Dichloropropene	563586	1	1		0.25 ug/L	U	U	
1,2,3-Trichlorobenzene	87616	1	1		0.332 ug/L	U	U	
1,2,3-Trichloropropane	96184	1	1		0.3 ug/L	U	U	
1,2,4-Trichlorobenzene	120821	1	1		0.3 ug/L	U	U	
1,2,4-Trimethylbenzene	95636	1	1		0.25 ug/L	U	U	
1,2-Dibromo-3-chloropropane	96128	1	1		0.3 ug/L	U	U	
1,2-Dibromoethane (EDB)	106934	1	1		0.25 ug/L	U	U	
1,2-Dichlorobenzene	95501	1	1		0.25 ug/L	U	U	
1,2-Dichloroethane	107062	1	1		0.25 ug/L	U	U	
1,2-Dichloropropane	78875	1	1		0.25 ug/L	U	U	
1,3,5-Trimethylbenzene	108678	1	1		0.25 ug/L	U	U	
1,3-Dichlorobenzene	541731	1	1		0.25 ug/L	U	U	
1,3-Dichloropropane	142289	1	1		0.3 ug/L	U	U	
1,4-Dichlorobenzene	106467	1	1		0.25 ug/L	U	U	
2,2-dichloropropane	594207	1	1		0.3 ug/L	U	U	
2-Butanone (MEK)	78933	5	5		1.25 ug/L	U	U	
2-Chloro-1,1,1-trifluoroethane	75887	10	10		3 ug/L	U	U	
2-Chloroethyl vinyl ether	110758	5	5		1.5 ug/L	U	U	
2-Chlorotoluene	95498	1	1		0.25 ug/L	U	U	
2-Hexanone	591786	5	5		1.25 ug/L	U	U	
4-Chlorotoluene	106434	1	1		0.25 ug/L	U	U	
4-Methyl-2-pentanone (MIBK)	108101	5	5		1.25 ug/L	U	U	
Acetone	67641	5	5		1.5 ug/L	U	U	
Benzene	71432	1	1		0.3 ug/L	U	U	
Bromobenzene	108861	1	1		0.25 ug/L	U	U	
Bromochloromethane	74975	1	1		0.3 ug/L	U	U	
Bromodichloromethane	75274	1	1		0.25 ug/L	U	U	
Bromoform	75252	1	1		0.25 ug/L	U	U	

## *Analysis Method*      *8260B*

Bromomethane	74839	1	1	0.3 ug/L	U	U
Carbon Tetrachloride	56235	1	1	0.3 ug/L	U	U
Chlorobenzene	108907	1	1	0.25 ug/L	U	U
Chloroethane	75003	1	1	0.3 ug/L	U	U
Chloroform	67663	1	1	0.25 ug/L	U	U
Chloromethane	74873	1	1	0.3 ug/L	U	U
Chlorotrifluoroethylene	79389	10	10	3 ug/L	U	U
cis-1,2-Dichloroethene	156592	1	1	0.3 ug/L	U	U
cis-1,3-Dichloropropene	10061015	1	1	0.25 ug/L	U	U
Dibromochloromethane	124481	1	1	0.3 ug/L	U	U
Dibromomethane	74953	1	1	0.3 ug/L	U	U
Dichlorodifluoromethane	75718	1	1	0.3 ug/L	U	U
Ethylbenzene	100414	1	1	0.25 ug/L	U	U
Hexachlorobutadiene	87683	1	1	0.3 ug/L	U	U
Isopropylbenzene	98828	1	1	0.25 ug/L	U	U
m,p-Xylenes	136777612	2	2	0.5 ug/L	U	U
Methylene chloride	75092	5	5	2 ug/L	U	U
Methyl-tert-butyl ether (MTBE)	1634044	1	1	0.25 ug/L	U	U
n-Butylbenzene	104518	1	1	0.25 ug/L	U	U
n-Propylbenzene	103651	1	1	0.25 ug/L	U	U
o-Xylene	95476	1	1	0.3 ug/L	U	U
p-Isopropyltoluene	99876	1	1	0.25 ug/L	U	U
sec-Butylbenzene	135988	1	1	0.25 ug/L	U	U
Styrene	100425	1	1	0.25 ug/L	U	U
tert-Butylbenzene	98066	1	1	0.25 ug/L	U	U
Tetrachloroethene	127184	1	1	0.3 ug/L	U	U
Toluene	108883	1	1	0.25 ug/L	U	U
trans-1,2-Dichloroethene	156605	1	1	0.3 ug/L	U	U
trans-1,3-Dichloropropene	10061026	1	1	0.25 ug/L	U	U
Trichloroethene	79016	1	1	0.25 ug/L	U	U
Trichlorofluoromethane	75694	1	1	0.3 ug/L	U	U
Vinyl chloride	75014	1	1	0.5 ug/L	U	U

*Analysis Method 8270C SIM*

Sample Name	FBQW2239	Matrix Type:	Water	Result Type:	Primary			
Lab Sample Name:	235913004	Sample	8/24/2009 2:00:00 PM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
1-Methylnaphthalene	90120	0.476	0.476	0.143	ug/L	U	U	
2-Methylnaphthalene	91576	0.476	0.476	0.143	ug/L	U	U	
Acenaphthene	83329	0.476	0.476	0.148	ug/L	U	U	
Acenaphthylene	208968	0.476	0.476	0.0952	ug/L	U	U	
Anthracene	120127	0.476	0.476	0.0952	ug/L	U	U	
Benzo(a)anthracene	56553	0.476	0.476	0.0952	ug/L	U	U	
Benzo(a)pyrene	50328	0.476	0.476	0.0952	ug/L	U	U	
Benzo(b)fluoranthene	205992	0.476	0.476	0.0952	ug/L	U	U	
Benzo(ghi)perylene	191242	0.476	0.476	0.0952	ug/L	U	U	
Benzo(k)fluoranthene	207089	0.476	0.476	0.0952	ug/L	U	U	
bis(2-ethylhexyl)phthalate	117817	0.476	0.476	0.143	ug/L	BJ	U	B, result changed from
Butyl benzyl phthalate	85687	0.476	0.476	0.143	ug/L	U	U	
Chrysene	218019	0.476	0.476	0.0952	ug/L	U	U	
Dibenzo(a,h)anthracene	53703	0.476	0.476	0.0952	ug/L	U	U	
Diethylphthalate	84662	0.476	0.476	0.143	ug/L	U	U	
Dimethylphthalate	131113	0.476	0.476	0.143	ug/L	U	U	
Di-n-butylphthalate	84742	0.476	0.476	0.143	ug/L	U	U	
Di-n-octyl-phthalate	117840	0.476	0.476	0.143	ug/L	U	U	
Fluoranthene	206440	0.476	0.476	0.0952	ug/L	U	U	
Fluorene	86737	0.476	0.476	0.0952	ug/L	U	U	
Indeno(1,2,3-cd)pyrene	193395	0.476	0.476	0.0952	ug/L	U	U	
Naphthalene	91203	0.476	0.476	0.143	ug/L	U	U	
n-Nitrosodimethylamine	62759	0.476	0.476	0.0952	ug/L	U	U	
Phenanthrene	85018	0.476	0.476	0.0952	ug/L	U	U	
Pyrene	129000	0.476	0.476	0.143	ug/L	U	U	

*Analysis Method 8321A*

Sample Name	FBQW2239	Matrix Type:	Water	Result Type:	Primary			
Lab Sample Name:	235913004	Sample	8/24/2009 2:00:00 PM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
2,4-diamino-6-nitrotoluene	6629294	1.3	1.3	0.39	ug/L	U	U	
2,6-diamino-4-nitrotoluene	59229753	1.3	1.3	0.39	ug/L	U	U	

*Analysis Method*    8330

**Sample Name**            FBQW2239                            **Matrix Type:** Water                            **Result Type:** Lab Repeat  
**Lab Sample Name:**    235913004                            **Sample**                            8/24/2009 2:00:00 PM                            **Validation**                            V

<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result</b>	<b>Lab Qualifier</b>	<b>Validation</b>	<b>Validation Notes</b>
1,3,5-Trinitrobenzene	99354	0.325	0.325	0.0649	ug/L	U	U	
2,4,6-Trinitrotoluene	118967	0.487	0.487	0.162	ug/L	U	U	
2,4-Dinitrotoluene	121142	0.487	0.487	0.162	ug/L	U	U	
2,6-Dinitrotoluene	606202	0.487	0.487	0.162	ug/L	U	U	
4-Amino-2,6-Dinitrotoluene	19406510	0.487	0.487	0.162	ug/L	U	U	
HMX	2691410	0.487	0.487	0.162	ug/L	U	U	
m-Dinitrobenzene	99650	0.325	0.325	0.0649	ug/L	U	U	
m-Nitrotoluene	99081	0.325	0.325	0.126	ug/L	U	U	
Nitrobenzene	98953	0.325	0.325	0.0649	ug/L	U	U	
Nitroglycerin	55630	1.95	1.95	0.649	ug/L	U	U	
o-Nitrotoluene	88722	0.487	0.487	0.162	ug/L	U	U	
PETN	78115	1.95	1.95	0.649	ug/L	U	U	
p-Nitrotoluene	99990	0.487	0.487	0.162	ug/L	U	U	
RDX	121824	0.487	0.487	0.162	ug/L	U	U	
Tetryl	479458	1.46	1.46	0.487	ug/L	U	U	

# **Chain of Custody and Supporting Documentation**





# SAMPLE RECEIPT & REVIEW FORM

Client: <u>SSFL</u>		SDG/ARCOC/Work Order: <u>26116</u>	
Received By: <u>JP</u>		Date Received: <u>8/27/09</u>	
<b>Suspected Hazard Information</b>	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Counts Observed*: <u>40 cpm</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken    damaged container    leaking container    other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	<input checked="" type="checkbox"/>			Preservation Method: <u>40</u> <u>ice bags</u> blue ice    dry ice    none    other (describe)
3	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4	Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken    damaged container    leaking container    other (describe)
5	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7	Are Encore containers present?	<input checked="" type="checkbox"/>			(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	<input checked="" type="checkbox"/>			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			

Comments:  
Fed Ey  
9457 3158 0570

PM (or PMA) review: Initials JP Date 8/27/09

## LABORATORY TASK ORDER (LTO) FORM

*INSTRUCTIONS: To be completed by Environmental Contractor & Emailed to Laboratory Project Manager, CH2M HILL (boeingdms@ch2m.com) & the Data Validator at Least 48 hrs prior to need for sample containers. Project Analytical Laboratory will confirm receipt via E-Mail.*

**Event Name:** ISRA Sampling, August 2009 \_\_\_\_\_

**Start:** 8/24/2009 \_\_\_\_\_

**End:** 9/30/2009 \_\_\_\_\_

**LTO DATE:**

**LTO NUMBER:**

<p><b>Consultant Name:</b> <u>MWH</u>  <b>Address:</b> <u>2121 N. California Blvd. Ste. 600</u>  <u>Walnut Creek, CA 94596</u></p> <p><b>Contact Name:</b> <u>Sarah Von Raesfeld</u>  <b>Phone Number:</b> <u>925-627-4654</u>  <b>Fax Number:</b> <u>925-627-4501</u>  <b>E-mail Address:</b> <u><a href="mailto:Sarah.VonRaesfeld@mwhglobal.com">Sarah.VonRaesfeld@mwhglobal.com</a></u></p>	<p><b>Contract Laboratory:</b> <u>GEL</u>  <b>Address:</b> <u>2040 Savage Rd.</u>  <u>Charleston, SC 29407</u></p> <p><b>Lab Contact Name:</b> <u>Jackie Trudell</u>  <b>Phone Number:</b> <u>843-769-7388</u>  <b>Fax Number:</b> <u>843-766-1178</u>  <b>E-mail Address:</b> <u><a href="mailto:jacqueline.trudell@gel.com">jacqueline.trudell@gel.com</a></u></p>
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### SAMPLE CONTAINER ORDER FORM

<p><b>Date Required:</b> _____</p> <p><b>Date Sample Pickup:</b> _____</p> <p><b>Ship Containers To:</b>          Project Site _____ (enter "X")          Consultant Office _____ (enter "X")          Other Location (specify in comments) _____ (enter "X")</p> <p><b>Container Information:</b>          Trip Blank (VOA only) <u>No</u> (Yes/No)          Temp Blank (VOA Only) <u>No</u> (Yes/No)          DI Water Required? <u>No</u> (Yes/No)          MS/MSD Extra Bottles? <u>No</u> (Yes/No)</p> <p><b>Sample Matrix:</b>          Soil <u>X</u> (select all applicable)          Water <u>X</u> (select all applicable)          Vapor _____ (select all applicable)</p> <p>Est. Total # of Samples: <u>175</u>      Est. Total # of EDDs <u>40</u></p>	<p><b>Requested Analyses:</b> (Specify # of Samples)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Water</th> <th style="text-align: center;">Soil</th> <th style="text-align: center;">Contingent</th> </tr> </thead> <tbody> <tr> <td><b>Dioxins (1613B)</b></td> <td style="text-align: center;">15</td> <td style="text-align: center;">124</td> <td style="text-align: center;">0</td> </tr> <tr> <td>EPA 8015M (DRO)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8015M (JET FUEL)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8015M (CC)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td><b>TCE (8260B)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">12</td> <td style="text-align: center;">0</td> </tr> <tr> <td>EPA 8270C SIM (SVOC)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td>EPA 8310 (PAH)</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td><b>EPA 8082 (PCB)</b></td> <td style="text-align: center;">3</td> <td style="text-align: center;">5</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Nickel (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">10</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Chromium (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">10</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Silver (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">10</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Cadmium (6020)</b></td> <td style="text-align: center;">10</td> <td style="text-align: center;">35</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Arsenic (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">10</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>% Moisture (D2216)</b></td> <td style="text-align: center;">0</td> <td style="text-align: center;">170</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Lead (6020)</b></td> <td style="text-align: center;">10</td> <td style="text-align: center;">65</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Copper (6020)</b></td> <td style="text-align: center;">10</td> <td style="text-align: center;">75</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Zinc (6020)</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">20</td> <td style="text-align: center;">0</td> </tr> <tr> <td><b>Mercury by 7471A/7470A</b></td> <td style="text-align: center;">5</td> <td style="text-align: center;">25</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>		Water	Soil	Contingent	<b>Dioxins (1613B)</b>	15	124	0	EPA 8015M (DRO)	--	--	--	EPA 8015M (JET FUEL)	--	--	--	EPA 8015M (CC)	--	--	--	<b>TCE (8260B)</b>	5	12	0	EPA 8270C SIM (SVOC)	--	--	--	EPA 8310 (PAH)	--	--	--	<b>EPA 8082 (PCB)</b>	3	5	0	<b>Nickel (6020)</b>	5	10	0	<b>Chromium (6020)</b>	5	10	0	<b>Silver (6020)</b>	5	10	0	<b>Cadmium (6020)</b>	10	35	0	<b>Arsenic (6020)</b>	5	10	0	<b>% Moisture (D2216)</b>	0	170	0	<b>Lead (6020)</b>	10	65	0	<b>Copper (6020)</b>	10	75	0	<b>Zinc (6020)</b>	5	20	0	<b>Mercury by 7471A/7470A</b>	5	25	0
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### LABORATORY REPORTING REQUIREMENTS

<p><b>Project TAT:</b>          Normal: <u>X</u> (10 Business days)          RUSH: <u>5</u> (Specify- 24 / 48 / 72HRS)          Other : _____ (Specify # of Days)          Report Due Date: _____</p> <p><b>Special Reporting Requirements:</b>          Contingent Analysis? <u>No</u> (Yes/No)          TIC (VOC) Required? <u>No</u> (Yes/No)          TIC (SVOC) Required? <u>No</u> (Yes/No)          Data Validation Pckge.: <u>Tier III</u> ( Boeing Tier I, II or III)</p>	<p><b>Laboratory Results/Reports Deliverables:</b>          Draft Results Fax?: _____ (Yes/No)          Draft Results E-mail?: <u>Yes</u> (Yes/No)          Specify Fax/E-mail Contact          Name, #, E-mail Address: <u>Sarah.VonRaesfeld@mwhglobal.com</u>          Send Original Reports To:          Project Site _____ (enter "X")          Consultant Office _____ (enter "X")          Other Location (specify in comments) <u>X</u> (enter "X")          # of Copies Reports Req.: <u>1</u></p>
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### SPECIAL INSTRUCTIONS/LTO NOTES

### CONFIRMATION OF TRANSMITTAL & RECEIPT

<p><b>LTO Sent By:</b>          Name: <u>Sarah Von Raesfeld</u>          Date: <u>09/02/09</u></p>	<p><b>LTO Received By-:</b>          Name: _____          Date: _____</p>
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## LABORATORY TASK ORDER (LTO) FORM (PAGE 2)

### ADDITIONAL REQUIRED ANALYSES

LTO DATE:

LTO NUMBER:

**Consultant Name:** MWH  
**Address:** 2121 N. California Blvd. Ste. 600  
Walnut Creek, CA 94596

**Contract Laboratory:** GEL  
**Address:** 2040 Savage Rd.  
Charleston, SC 29407

**Contact Name:** Sarah Von Raesfeld  
**Phone Number:** 925-627-4654  
**Fax Number:** 925-627-4501  
**E-mail Address:** [Sarah.VonRaesfeld@mwhglobal.com](mailto:Sarah.VonRaesfeld@mwhglobal.com)

**Lab Contact Name:** Jackie Trudell  
**Phone Number:** 843-769-7388  
**Fax Number:** 843-766-1178  
**E-mail Address:** [jacqueline.trudell@gel.com](mailto:jacqueline.trudell@gel.com)

### SAMPLE CONTAINER ORDER FORM (CONTINUED)

**Requested Analyses:** (Specify # of Samples)

	Water	Soil	Contingent
Arsenic (6020)	--	--	--
Lead (6020)	--	--	--
Cadmium (6020)	--	--	--
Lithium (6020)	--	--	--
Sodium (6020)	--	--	--
Selenium (6020)	--	--	--
Thallium (6020)	--	--	--
Zinc (6020)	--	--	--
Boron (6010B)	--	--	--
Vanadium (6010B)	--	--	--
Copper (6020)	--	--	--
Zirconium (6020)	--	--	--

## Table of Contents

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# **Case Narrative**

**Case Narrative  
for  
Boeing - SSFL (MWH)  
Work Order: 236116  
SDG: 236116**

**September 03, 2009**

**Laboratory Identification:**

GEL Laboratories LLC  
2040 Savage Road  
Charleston, South Carolina 29407  
(843) 556-8171

**Summary:**

**Sample Receipt**

The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on August 27, 2009 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

The laboratory received the following samples:

<b><u>Laboratory Identification</u></b>	<b><u>Sample Description</u></b>
236116001	EBQW2245
236116002	HZET0900S001
236116003	HZET0901S001
236116004	HZET0902S001
236116005	HZET0903S001
236116006	HZET0904S001

**Items of Note**

Santa Susanna Field Laboratory Technical Representative was contacted seeking resolution to any analytical and/or receipt issues. Please see the enclosed e-mails.

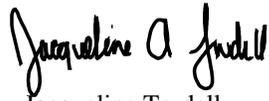
**Case Narrative**

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

**Data Package:**

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Metals, Percent Moisture and Dioxins (Cape Fear Analytical).

I certify that this data package is in compliance with the terms and conditions of the subcontract and task order, both technically and for the completeness, for other than the conditions detailed in the attached case narratives.

A handwritten signature in black ink that reads "Jacqueline A. Trudell". The signature is written in a cursive style with a large initial 'J'.

Jacqueline Trudell

Project Manager

# **Data Qualifiers Definitions**

## Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

# **Laboratory Certifications**

**List of current GEL Certifications as of 01 September 2009**

<b>State</b>	<b>Certification</b>
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641



# DATA VALIDATION REPORT

Boeing SSFL RFI ISRA

SAMPLE DELIVERY GROUP: 236116

Prepared by

MEC<sup>X</sup>, LP  
12269 East Vassar Drive  
Aurora, CO 80014

## I. INTRODUCTION

Task Order Title: Boeing SSFL RFI ISRA  
 Contract Task Order: 1261.500D.00  
 Sample Delivery Group: 236116  
 Project Manager: Dixie Hambrick  
 Matrix: water/soil  
 QC Level: V  
 No. of Samples: 6  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: GEL

**Table 1. Sample Identification**

<b>Sample Name</b>	<b>Lab Sample Name</b>	<b>Sub-Lab Sample Name</b>	<b>Matrix</b>	<b>Collection</b>	<b>Method</b>
EBQW2245	236116001	1045006	WATER	8/26/2009 3:48:00 PM	1613B, 6020
HZET0900S001	236116002	1045001	SOIL	8/26/2009 2:55:00 PM	1613B, 6020
HZET0901S001	236116003	1045002	SOIL	8/26/2009 3:30:00 PM	1613B, 6020
HZET0902S001	236116004	1045003	SOIL	8/26/2009 2:25:00 PM	1613B, 6020
HZET0903S001	236116005	1045004	SOIL	8/26/2009 2:40:00 PM	1613B, 6020
HZET0904S001	236116006	1045005	SOIL	8/26/2009 3:10:00 PM	1613B, 6020

## II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.

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**Data Qualifier Reference Table**


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Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
T-I	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents a compound with a CAS number and fit greater than 80%.	Not applicable

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T-II	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents a class of compound but not of sufficient identification quality to represent a specific compound.	Not applicable
T-III	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. The tentative identification represents an unknown compound.	Not applicable
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

---

### Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

---

**Qualification Code Reference Table Cont.**

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

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### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: P. Meeks

Date Reviewed: October 13, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review (08/02)*.

- Holding Times: Extraction and analytical holding times were met. The samples were extracted and analyzed within one year of collection.
- Instrument Performance: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: The soil method blank had detects for all but two target compounds. Individual isomers detected below the reporting limit or at concentrations less than 5× the method blank concentration were qualified as nondetected, “U,” at the reporting limit if detected below the reporting limit or at the level of contamination if detected above. All totals were qualified as estimated, “J,” due to detects in the soil method blank. Total PeCDF was detected in the aqueous method blank; therefore, total PeCDF was qualified as estimated, “J,” in EBQW2245.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613 and the RPDs were within the laboratory-established control limits.
- MS/MSD analyses were performed on HZER0902S001. Recoveries were within the acceptance criteria listed in Table 6 of Method 1613 and the RPDs were within the laboratory-established control limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: EBQW2245 was identified as the equipment rinsate associated with the samples in this SDG. Total PeCDF was detected in this sample at 1.05 pg/L. Total PeCDF detected in HZET0900S001 and HZET0903S001 was qualified as estimated, “J.” There were no other detects above the EDL in EBQW2245. This SDG had no identified field blank.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

- **Internal Standards Performance:** Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- **Compound Identification:** Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The laboratory performed and reported confirmation analyses for all TCDF detects. As the confirmation analyses resulted in results similar to the original analyses, the reviewer rejected, "R," the confirmation analyses in all samples except HZET0902S001 favor of the original analyses. The original TCDF result for HZET0902S001 was reported as an estimated maximum possible concentration (EMPC); however, as the confirmation result was not reported as an EMPC, the reviewer rejected, "R," the original result in favor of the confirmation result in HZET0902S001.
- **Compound Quantification and Reported Detection Limits:** Review is not applicable at a Level V validation. The laboratory calculated and reported compound-specific detection limits (EDLs). EMPCs were identified in the samples of this SDG and qualified with a "K" by the laboratory. Any EMPC was qualified as estimated, "UJ," in the samples of this SDG. EMPCs reported as totals were qualified as estimated, "J," as only a portion of the total was identified as an EMPC. Any detect below the laboratory lower calibration level was qualified as estimated, "J." Nondetects are valid to the estimated detection limit (EDL).

## B. EPA METHOD 6020—Zinc

Reviewed By: P. Meeks

Date Reviewed: October 13, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Method 6020*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- **Holding Times:** The analytical holding time, six months for ICP-MS metals, was met.
- **Tuning:** Review is not applicable at a Level V validation.
- **Calibration:** Review is not applicable at a Level V validation.
- **Blanks:** Method blanks and CCBs had no applicable detects.
- **Interference Check Samples:** Review is not applicable at a Level V validation.
- **Blank Spikes and Laboratory Control Samples:** Recoveries and the aqueous RPD were within laboratory-established QC limits.

- Laboratory Duplicates: A laboratory duplicate analysis was performed on HZET0902S001. The RPD was within the method-established control limit.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZET0902S001. Recoveries and the RPD were within laboratory-established QC limits.
- Serial Dilution: Serial dilution analyses were performed on HZET0902S001 and EBQW2245. The %Ds were within the method-established control limit.
- Internal Standards Performance: Review is not applicable at a Level V validation.
- Sample Result Verification: Review is not applicable at a Level V validation. As the samples in this SDG were validated at Level V, the QC information necessary to make an absolute determination of bias in the samples was not reviewed; therefore, when qualifications were applied, no bias was assigned. The soil results were reported from the laboratory's standard 2× dilution for soils. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2245 was identified as the equipment rinsate associated with the samples in this SDG. Zinc was not detected in this sample.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

# Validated Sample Result Forms: 236116

*Analysis Method 1613B*

Sample Name	EBQW2245	Matrix Type:	Water	Result Type:	Primary Result		
Lab Sample Name:	1045006	Sample Date:	8/26/2009 3:48:00 PM	Validation Level:	V		
Analyte	CAS No	Result Value	RL	MDL Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822469	2.6	23.8	2.6 pg/L	U	U	
1,2,3,4,6,7,8-HpCDF	67562394	1.39	23.8	1.39 pg/L	U	U	
1,2,3,4,7,8,9-HpCDF	55673897	2.32	23.8	2.32 pg/L	U	U	
1,2,3,4,7,8-HxCDD	39227286	1.65	23.8	1.65 pg/L	U	U	
1,2,3,4,7,8-HxCDF	70648269	1.06	23.8	1.06 pg/L	U	U	
1,2,3,6,7,8-HxCDD	57653857	1.77	23.8	1.77 pg/L	U	U	
1,2,3,6,7,8-HxCDF	57117449	1.13	23.8	1.13 pg/L	U	U	
1,2,3,7,8,9-HxCDD	19408743	1.8	23.8	1.8 pg/L	U	U	
1,2,3,7,8,9-HxCDF	72918219	1.47	23.8	1.47 pg/L	U	U	
1,2,3,7,8-PeCDD	40321764	1.28	23.8	1.28 pg/L	U	U	
1,2,3,7,8-PeCDF	57117416	0.821	23.8	0.821 pg/L	U	U	
2,3,4,6,7,8-HxCDF	60851345	1.13	23.8	1.13 pg/L	U	U	
2,3,4,7,8-PeCDF	57117314	1.05	23.8	1.05 pg/L	U	U	
2,3,7,8-TCDD	1746016	1.32	4.75	1.32 pg/L	U	U	
2,3,7,8-TCDF	51207319	1.63	4.75	1.63 pg/L	U	U	
OCDD	3268879	4.83	47.5	4.83 pg/L	U	U	
OCDF	39001020	5.3	47.5	5.3 pg/L	U	U	
Total HpCDD	37871004	2.6	23.8	2.6 pg/L	U	U	
Total HpCDF	38998753	1.39	23.8	1.39 pg/L	U	U	
Total HxCDD	34465468	1.65	23.8	1.65 pg/L	U	U	
Total HxCDF	55684941	1.06	23.8	1.06 pg/L	U	U	
Total PeCDD	36088229	1.28	23.8	1.28 pg/L	U	U	
Total PeCDF	30402154	1.05	23.8	0.741 pg/L	J	J	B
Total TCDD	41903575	1.32	4.75	1.32 pg/L	U	U	
Total TCDFs	55722275	1.63	4.75	1.63 pg/L	U	U	

Analysis Method 1613B

Sample Name	HZET0900S001	Matrix Type:	Soil	Result Type:	Primary Result			
Lab Sample Name:	1045001	Sample Date:	8/26/2009 2:55:00 PM	Validation Level:	V			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822469	2.21	2.21	2.21	pg/g	JK	UJ	*III, result changed from 0.39 and EDL from 0.246
1,2,3,4,6,7,8-HpCDF	67562394	0.149	2.21	0.108	pg/g	J	J	
1,2,3,4,7,8,9-HpCDF	55673897	0.167	2.21	0.167	pg/g	U	U	
1,2,3,4,7,8-HxCDD	39227286	0.121	2.21	0.121	pg/g	U	U	
1,2,3,4,7,8-HxCDF	70648269	0.076	2.21	0.076	pg/g	U	U	
1,2,3,6,7,8-HxCDD	57653857	0.14	2.21	0.14	pg/g	U	U	
1,2,3,6,7,8-HxCDF	57117449	2.21	2.21	2.21	pg/g	JK	UJ	*III, result changed from 0.105 and EDL from 0.0831
1,2,3,7,8,9-HxCDD	19408743	0.137	2.21	0.137	pg/g	U	U	
1,2,3,7,8,9-HxCDF	72918219	0.115	2.21	0.115	pg/g	U	U	
1,2,3,7,8-PeCDD	40321764	0.105	2.21	0.105	pg/g	U	U	
1,2,3,7,8-PeCDF	57117416	2.21	2.21	2.21	pg/g	JK	UJ	*III, result changed from 0.129 and EDL from 0.0785
2,3,4,6,7,8-HxCDF	60851345	0.088	2.21	0.088	pg/g	U	U	
2,3,4,7,8-PeCDF	57117314	0.0875	2.21	0.0875	pg/g	U	U	
2,3,7,8-TCDD	1746016	0.0988	0.443	0.0988	pg/g	U	U	
2,3,7,8-TCDF	51207319	0.443	0.443	0.443	pg/g	J	U	B, result changed from 0.335 and EDL from 0.114
2,3,7,8-TCDF	51207319	0.443	0.443	0.443	pg/g	J	R	D
OCDD	3268879	4.43	4.43	4.43	pg/g	J	U	B, result changed from 2.09 and EDL from 0.427
OCDF	39001020	0.358	4.43	0.358	pg/g	U	U	
Total HpCDD	37871004	0.749	2.21	0.246	pg/g	J	J	B, *III
Total HpCDF	38998753	0.149	2.21	0.108	pg/g	J	J	B
Total HxCDD	34465468	0.121	2.21	0.121	pg/g	U	U	
Total HxCDF	55684941	0.22	2.21	0.076	pg/g	J	J	B, *III
Total PeCDD	36088229	0.105	2.21	0.105	pg/g	U	U	

*Analysis Method 1613B*

Total PeCDF	30402154	0.216	2.21	0.0551 pg/g	J	<b>J</b>	<b>B, F, *III</b>	
Total TCDD	41903575	0.0988	0.443	0.0988 pg/g	U	<b>U</b>		
Total TCDFs	55722275	0.792	0.443	0.114 pg/g		<b>J</b>	<b>B</b>	
<b>Sample Name</b>	HZET0901S001		<b>Matrix Type:</b> Soil		<b>Result Type:</b> Primary Result			
<b>Lab Sample Name:</b>	1045002	<b>Sample Date:</b> 8/26/2009 3:30:00 PM		<b>Validation Level:</b> V				
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
1,2,3,4,6,7,8-HpCDD	35822469	0.197	2.44	0.197 pg/g	U	<b>U</b>		
1,2,3,4,6,7,8-HpCDF	67562394	2.44	2.44	2.44 pg/g	JK	<b>UJ</b>	<b>*III, result changed from 0.156 and EDL from 0.118</b>	
1,2,3,4,7,8,9-HpCDF	55673897	0.18	2.44	0.18 pg/g	U	<b>U</b>		
1,2,3,4,7,8-HxCDD	39227286	0.121	2.44	0.121 pg/g	U	<b>U</b>		
1,2,3,4,7,8-HxCDF	70648269	0.0823	2.44	0.0823 pg/g	U	<b>U</b>		
1,2,3,6,7,8-HxCDD	57653857	0.14	2.44	0.14 pg/g	U	<b>U</b>		
1,2,3,6,7,8-HxCDF	57117449	0.0869	2.44	0.0869 pg/g	U	<b>U</b>		
1,2,3,7,8,9-HxCDD	19408743	0.137	2.44	0.137 pg/g	U	<b>U</b>		
1,2,3,7,8,9-HxCDF	72918219	0.12	2.44	0.12 pg/g	U	<b>U</b>		
1,2,3,7,8-PeCDD	40321764	0.0904	2.44	0.0904 pg/g	U	<b>U</b>		
1,2,3,7,8-PeCDF	57117416	0.0727	2.44	0.0727 pg/g	U	<b>U</b>		
2,3,4,6,7,8-HxCDF	60851345	0.0928	2.44	0.0928 pg/g	U	<b>U</b>		
2,3,4,7,8-PeCDF	57117314	0.0803	2.44	0.0803 pg/g	U	<b>U</b>		
2,3,7,8-TCDD	1746016	0.11	0.487	0.11 pg/g	U	<b>U</b>		
2,3,7,8-TCDF	51207319	0.487	0.487	0.487 pg/g	J	<b>U</b>	<b>B, result changed from 0.351 and EDL from 0.112</b>	
2,3,7,8-TCDF	51207319	0.487	0.487	0.487 pg/g	JK	<b>R</b>	<b>D</b>	
OCDD	3268879	0.37	4.87	0.37 pg/g	U	<b>U</b>		
OCDF	39001020	0.339	4.87	0.339 pg/g	U	<b>U</b>		
Total HpCDD	37871004	0.197	2.44	0.197 pg/g	U	<b>U</b>		
Total HpCDF	38998753	0.156	2.44	0.118 pg/g	J	<b>J</b>	<b>B, *III</b>	
Total HxCDD	34465468	0.121	2.44	0.121 pg/g	U	<b>U</b>		
Total HxCDF	55684941	0.146	2.44	0.0823 pg/g	J	<b>J</b>	<b>B</b>	
Total PeCDD	36088229	0.0904	2.44	0.0904 pg/g	U	<b>U</b>		
Total PeCDF	30402154	0.0573	2.44	0.0573 pg/g	U	<b>U</b>		
Total TCDD	41903575	0.11	0.487	0.11 pg/g	U	<b>U</b>		
Total TCDFs	55722275	0.807	0.487	0.112 pg/g		<b>J</b>	<b>B, *III</b>	

Analysis Method 1613B

Sample Name	HZET0902S001	Matrix Type:	Soil	Result Type:	Primary Result			
Lab Sample Name:	1045003	Sample Date:	8/26/2009 2:25:00 PM	Validation Level:	V			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822469	2.3	2.3	2.3	pg/g	JK	UJ	*III, result changed from 0.212 and EDL from 0.201
1,2,3,4,6,7,8-HpCDF	67562394	0.107	2.3	0.107	pg/g	U	U	
1,2,3,4,7,8,9-HpCDF	55673897	0.158	2.3	0.158	pg/g	U	U	
1,2,3,4,7,8-HxCDD	39227286	0.136	2.3	0.136	pg/g	U	U	
1,2,3,4,7,8-HxCDF	70648269	0.0765	2.3	0.0765	pg/g	U	U	
1,2,3,6,7,8-HxCDD	57653857	0.153	2.3	0.153	pg/g	U	U	
1,2,3,6,7,8-HxCDF	57117449	0.0798	2.3	0.0798	pg/g	U	U	
1,2,3,7,8,9-HxCDD	19408743	0.151	2.3	0.151	pg/g	U	U	
1,2,3,7,8,9-HxCDF	72918219	0.117	2.3	0.117	pg/g	U	U	
1,2,3,7,8-PeCDD	40321764	0.0964	2.3	0.0964	pg/g	U	U	
1,2,3,7,8-PeCDF	57117416	0.0756	2.3	0.0756	pg/g	U	U	
2,3,4,6,7,8-HxCDF	60851345	0.0853	2.3	0.0853	pg/g	U	U	
2,3,4,7,8-PeCDF	57117314	0.082	2.3	0.082	pg/g	U	U	
2,3,7,8-TCDD	1746016	0.108	0.461	0.108	pg/g	U	U	
2,3,7,8-TCDF	51207319	0.326	0.461	0.135	pg/g	JK	R	D
2,3,7,8-TCDF	51207319	0.361	0.461	0.132	pg/g	J	J	
OCDD	3268879	4.61	4.61	4.61	pg/g	J	U	B, result changed from 0.802 and EDL from 0.359
OCDF	39001020	0.363	4.61	0.363	pg/g	U	U	
Total HpCDD	37871004	0.415	2.3	0.201	pg/g	J	J	B, *III
Total HpCDF	38998753	0.107	2.3	0.107	pg/g	U	U	
Total HxCDD	34465468	0.136	2.3	0.136	pg/g	U	U	
Total HxCDF	55684941	0.0765	2.3	0.0765	pg/g	U	U	
Total PeCDD	36088229	0.0964	2.3	0.0964	pg/g	U	U	
Total PeCDF	30402154	0.0586	2.3	0.0586	pg/g	U	U	
Total TCDD	41903575	0.108	0.461	0.108	pg/g	U	U	
Total TCDFs	55722275	0.794	0.461	0.135	pg/g		J	B, *III

Analysis Method 1613B

Sample Name	HZET0903S001	Matrix Type:	Soil	Result Type:	Primary Result			
Lab Sample Name:	1045004	Sample Date:	8/26/2009 2:40:00 PM	Validation Level:	V			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822469	2.32	2.32	2.32	pg/g	JK	UJ	*III, result changed from 0.388 and EDL from 0.179
1,2,3,4,6,7,8-HpCDF	67562394	0.221	2.32	0.119	pg/g	J	J	
1,2,3,4,7,8,9-HpCDF	55673897	2.32	2.32	2.32	pg/g	JK	UJ	*III, result changed from 0.199 and EDL from 0.182
1,2,3,4,7,8-HxCDD	39227286	2.32	2.32	2.32	pg/g	J	U	B, result changed from 0.169 and EDL from 0.151
1,2,3,4,7,8-HxCDF	70648269	2.32	2.32	2.32	pg/g	JK	UJ	*III, result changed from 0.132 and EDL from 0.0997
1,2,3,6,7,8-HxCDD	57653857	2.32	2.32	2.32	pg/g	JK	UJ	*III, result changed from 0.232 and EDL from 0.159
1,2,3,6,7,8-HxCDF	57117449	2.32	2.32	2.32	pg/g	JK	UJ	*III, result changed from 0.167 and EDL from 0.1
1,2,3,7,8,9-HxCDD	19408743	2.32	2.32	2.32	pg/g	JK	UJ	*III, result changed from 0.23 and EDL from 0.163
1,2,3,7,8,9-HxCDF	72918219	0.18	2.32	0.129	pg/g	J	J	
1,2,3,7,8-PeCDD	40321764	2.32	2.32	2.32	pg/g	JK	UJ	*III, result changed from 0.13 and EDL from 0.109
1,2,3,7,8-PeCDF	57117416	0.16	2.32	0.0828	pg/g	J	J	
2,3,4,6,7,8-HxCDF	60851345	2.32	2.32	2.32	pg/g	JK	UJ	*III, result changed from 0.156 and EDL from 0.105
2,3,4,7,8-PeCDF	57117314	0.154	2.32	0.0852	pg/g	J	J	

*Analysis Method*     *1613B*

2,3,7,8-TCDD	1746016	0.0969	0.464	0.0969 pg/g	U	<b>U</b>	
2,3,7,8-TCDF	51207319	0.464	0.464	0.464 pg/g	J	<b>U</b>	<b>B, result changed from 0.267 and EDL from 0.123</b>
2,3,7,8-TCDF	51207319	0.464	0.464	0.464 pg/g	J	<b>R</b>	<b>D</b>
OCDD	3268879	4.64	4.64	4.64 pg/g	J	<b>U</b>	<b>B, result changed from 1.38 and EDL from 0.327</b>
OCDF	39001020	4.64	4.64	4.64 pg/g	J	<b>U</b>	<b>B, result changed from 0.672 and EDL from 0.33</b>
Total HpCDD	37871004	0.598	2.32	0.179 pg/g	J	<b>J</b>	<b>B, *III</b>
Total HpCDF	38998753	0.419	2.32	0.119 pg/g	J	<b>J</b>	<b>B, *III</b>
Total HxCDD	34465468	0.631	2.32	0.144 pg/g	J	<b>J</b>	<b>B, *III</b>
Total HxCDF	55684941	0.635	2.32	0.0997 pg/g	J	<b>J</b>	<b>B, *III</b>
Total PeCDD	36088229	0.13	2.32	0.109 pg/g	J	<b>J</b>	<b>B, *III</b>
Total PeCDF	30402154	0.314	2.32	0.0551 pg/g	J	<b>J</b>	<b>B, F</b>
Total TCDD	41903575	0.0969	0.464	0.0969 pg/g	U	<b>U</b>	
Total TCDFs	55722275	0.657	0.464	0.123 pg/g		<b>J</b>	<b>B</b>

Analysis Method 1613B

Sample Name	HZET0904S001	Matrix Type:	Soil	Result Type:	Primary Result			
Lab Sample Name:	1045005	Sample Date:	8/26/2009 3:10:00 PM	Validation Level:	V			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822469	3.94	2.35	0.226	pg/g			
1,2,3,4,6,7,8-HpCDF	67562394	2.35	2.35	2.35	pg/g	JK	UJ	*III, result changed from 1.13 and EDL from 0.144
1,2,3,4,7,8,9-HpCDF	55673897	0.211	2.35	0.211	pg/g	U	U	
1,2,3,4,7,8-HxCDD	39227286	2.35	2.35	2.35	pg/g	JK	UJ	*III, result changed from 0.614 and EDL from 0.161
1,2,3,4,7,8-HxCDF	70648269	2.35	2.35	2.35	pg/g	J	U	B, result changed from 0.425 and EDL from 0.11
1,2,3,6,7,8-HxCDD	57653857	0.178	2.35	0.178	pg/g	U	U	
1,2,3,6,7,8-HxCDF	57117449	0.533	2.35	0.127	pg/g	J	J	
1,2,3,7,8,9-HxCDD	19408743	0.772	2.35	0.178	pg/g	J	J	
1,2,3,7,8,9-HxCDF	72918219	0.18	2.35	0.18	pg/g	U	U	
1,2,3,7,8-PeCDD	40321764	2.35	2.35	2.35	pg/g	JK	UJ	*III, result changed from 0.222 and EDL from 0.126
1,2,3,7,8-PeCDF	57117416	0.755	2.35	0.155	pg/g	J	J	
2,3,4,6,7,8-HxCDF	60851345	2.35	2.35	2.35	pg/g	J	U	B, result changed from 0.25 and EDL from 0.133
2,3,4,7,8-PeCDF	57117314	0.45	2.35	0.16	pg/g	J	J	
2,3,7,8-TCDD	1746016	0.133	0.471	0.133	pg/g	U	U	
2,3,7,8-TCDF	51207319	0.755	0.755	0.755	pg/g		U	B, RL changed from 0.471 and EDL from 0.281
2,3,7,8-TCDF	51207319	0.68	0.471	0.159	pg/g		R	D
OCDD	3268879	23	4.71	0.337	pg/g			
OCDF	39001020	4.71	4.71	4.71	pg/g	J	U	B, result changed from 1.7 and EDL from 0.346

*Analysis Method*    *1613B*

Total HpCDD	37871004	10.3	2.35	0.226 pg/g		<b>J</b>	<b>B</b>
Total HpCDF	38998753	1.79	2.35	0.144 pg/g	J	<b>J</b>	<b>B, *III</b>
Total HxCDD	34465468	4.26	2.35	0.158 pg/g		<b>J</b>	<b>B, *III</b>
Total HxCDF	55684941	3.68	2.35	0.11 pg/g		<b>J</b>	<b>B</b>
Total PeCDD	36088229	2.74	2.35	0.126 pg/g		<b>J</b>	<b>B, *III</b>
Total PeCDF	30402154	6.86	2.35	0.0574 pg/g		<b>J</b>	<b>B</b>
Total TCDD	41903575	0.689	0.471	0.133 pg/g		<b>J</b>	<b>B</b>
Total TCDFs	55722275	7.75	0.471	0.281 pg/g		<b>J</b>	<b>B</b>

*Analysis Method*    6020

<b>Sample Name</b>	EBQW2245	<b>Matrix Type:</b> Water				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	236116001	<b>Sample Date:</b> 8/26/2009 3:48:00 PM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Zinc	7440666	3	10		3 ug/L	U	U	
<b>Sample Name</b>	HZET0900S001	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	236116002	<b>Sample Date:</b> 8/26/2009 2:55:00 PM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Zinc	7440666	38.7	2.05		0.411 mg/kg			
<b>Sample Name</b>	HZET0901S001	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	236116003	<b>Sample Date:</b> 8/26/2009 3:30:00 PM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Zinc	7440666	66.6	2.32		0.464 mg/kg			
<b>Sample Name</b>	HZET0902S001	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	236116004	<b>Sample Date:</b> 8/26/2009 2:25:00 PM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Zinc	7440666	43.1	1.97		0.395 mg/kg			
<b>Sample Name</b>	HZET0903S001	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	236116005	<b>Sample Date:</b> 8/26/2009 2:40:00 PM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Zinc	7440666	45.4	2.19		0.438 mg/kg			
<b>Sample Name</b>	HZET0904S001	<b>Matrix Type:</b> Soil				<b>Result Type:</b> Primary Result		
<b>Lab Sample Name:</b>	236116006	<b>Sample Date:</b> 8/26/2009 3:10:00 PM				<b>Validation Level:</b> V		
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Zinc	7440666	43.3	2.23		0.447 mg/kg			