

# **Chain of Custody and Supporting Documentation**

23134241  
2309527- JT 6/9/09



**CHAIN OF CUSTODY RECORD**

COC #: MW-HBM20090603\_00  
Page: 1 of 3

Customer Information		Project Information		Project Information			
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martasin		
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009	Contact #:			
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521	Boeing PM:			
Address:	2121 N. California Blvd	Project Manager:	Alex Fischl				
	Suite 600	PM Phone #:	(925) 627-4627				
	Walnut Creek	Field Contact:	Brian Martasin				
	CA	Field Contact #:	(323) 304-4969				
	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	Requested Analyses	Instructions/TAT	Comments
B1S0080D001	Soil	6/3/2009	0:00	4	D2216 Moisture Soil		
B1TB2008T001	Water	6/3/2009	7:00	3	Metals 6010B Water Aluminum		
B1S0080S001	Soil	6/3/2009	7:43	4	Metals 6010B Soil Aluminum		
B1S0080S002	Soil	6/3/2009	7:50	4	Metals 6020 Water Arsenic		
B1S0082S001	Soil	6/3/2009	8:30	1	Metals 6020 Soil Zinc		
B1S0082S002	Soil	6/3/2009	8:40	1	Metals 6020 Soil Selenium		
B1S0083S001	Soil	6/3/2009	8:55	1	Metals 6020 Soil Lead		
B1S0081S001	Soil	6/3/2009	9:20	1	Metals 6020 Soil Copper		
B1S0078S001	Soil	6/3/2009	9:35	4	Metals 6020 Soil Cadmium		
B1S0078S002	Soil	6/3/2009	9:40	4	Metals 6020 Se Water		
					Metals 6020 Cu Water		
					Metals 6020 Cd Water		
					Metals 6020 Be Water		
					Metals 6020 Be Soil		
					Metals 7470A Water Mercury		
					Metals 7471A Soil Mercury		
					PCB by SW8082 - Soil		
					PCB by SW8082 - Water		
					SVOCs by SW8270C SIM - Soil		
					SVOCs by SW8270C SIM - Water		
					TPH by SW8015BM - Soil		
					TPH by SW8015BM - Water		
					VOC by SW8260B - Soil		
					VOC by SW8260B - Water		

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	4. Received by:	Date:
<i>[Signature]</i>	6-3-09	<i>R.M. Stalling</i>	6/4/09				
Company: MWH	Time: 1515	Company: CTEL	Time: 905	Company:	Time:	Company:	Time:

Comments:

Geotracker EDF  Data Validation Package  Level IV

2309627-231312H  
 JT 6/19/09

**CHAIN OF CUSTODY RECORD**

COC #: MWHBM20090603\_00  
 Page: 2 of 3

Customer Information		Project Information		Boeing PM:	
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martasin
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009	Contact #:	
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521	Requested Analyses	
Address:	2121 N. California Blvd	Project Manager:	Alex Fischl	Metals 6020 Water Arsenic	
	Suite 600	PM Phone #:	(925) 627-4627	Metals 6020 Water Lead	
	Walnut Creek	Field Contact:	Brian Martasin	Metals 6020 Water Zinc	
	CA	Field Contact #:	(323) 304-4969	Metals 6020 Soil Selenium	
	94596	Lab Name:	GEL Laboratories, LLC	Metals 6020 Soil Lead	
Email:	sarah.vonraesfeld@mwhglobal.c	Lab Contact:	Jackie Trudell	Metals 6020 Soil Copper	
	sean.leifer@mwhglobal.com	Lab Address:	2040 Savage Road	Metals 6020 Soil Cadmium	
		Lab Phone:	Charleston, SC 29407	Metals 6020 Soil Arsenic	
			(843) 769-7388	Metals 6020 Se Water	
				Metals 6020 Cu Water	
				Metals 6020 Cd Water	
				Metals 6020 Be Water	
				Metals 6020 Be Soil	
				Metals 6010B Water Aluminum	
				Metals 6010B Soil Aluminum	
				D2216 Moisture Soil	
Sample Name	Matrix	Date	Time	No. of Containers	Comments
B1BS0077S001	Soil	6/3/2009	10:00	4	
B1BS0077S002	Soil	6/3/2009	10:15	4	
ILBS0253S001	Soil	6/3/2009	10:55	1	
ILBS0253S002	Soil	6/3/2009	11:00	1	
ILBS0252S001	Soil	6/3/2009	11:15	1	
ILBS0252S002	Soil	6/3/2009	11:20	1	
ILBS0251S001	Soil	6/3/2009	12:20	1	
ILBS0251S002	Soil	6/3/2009	12:30	1	
ILBS0250S001	Soil	6/3/2009	12:45	1	
ILBS0249S001	Soil	6/3/2009	13:00	1	

1. Relinquished by:	Date: 6-3-09	2. Received by:	Date: 6/4/09	3. Relinquished by:	Date:	4. Received by:	Date:
Company: MWH	Time: 1:515	Company: GEL	Time: 9:45	Company:	Time:	Company:	Time:

Geotracker EDF  Data Validation Package  Level IV

Comments:



231342H

Client: <u>SSF1</u>		SDG/ARCOC/Work Order: <u>2309527</u> <u>JT</u> 6/9/09	
Received By: <u>RMS</u>		Date Received: <u>6/4/09</u>	
Suspected Hazard Information	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*:
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	<u>40cpm</u>
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"/>			ice bags    blue ice    dry ice    none    other (describe) <u>6.4°</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:
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:

Fx: 9457 3161 5453 @ 6°  
 " " 5394 @ 4°

PM (or PMA) review: Initials JT Date 6/4/09

Date: 06/09/09

Requesting Firm: MWH  
Address: 2121 No. California Blvd.  
Walnut Creek, CA 94596  
Phone: 925-627-4654  
Fax: 925-627-4501  
E-mail: Sarah.VonRaesfeld@mwhglobal.com

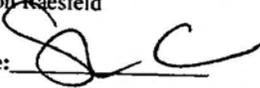
To: Jackie Trudell

Phone: 843-769-7388

Laboratory GEL Laboratories, LLC

E-mail:  
jacqueline.trudell@gel.com

From: Sarah Von Raesfeld

Requestor signature: 

Subject: Chain-of-Custody Form Analytical Request Change No. of Pages: 4

**Per Request:**

Please make the changes listed below to the chain-of-custody analytical request form. Include this form with the final deliverables for these samples.

COC No.	Client Sample ID(s)	Date Collected	Originally Requested Analyses	Change (s) and Method (s) Now Requested
MWHBM20090603_00	B1BS0077S002 B1BS0078S002 B1BS0080S002	06/03/09		Run VOCs

The reason for these changes:

*Incorrectly marked on COC form*

*Lack of sample volume*

*Change in analytical request*

*Other:*

\_\_\_\_\_

\_\_\_\_\_

X

\_\_\_\_\_

\_\_\_\_\_

Thank you



2309521

CHAIN OF CUSTODY RECORD

COC #: MWHBM20090603\_00  
Page: 2 of 3

Customer Information				Project Information			
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martash	Boeing PM:	
Company:	MWH	Sampling Event:	ISRA Sampling, June 2008	Contact #:			
Report to:	Sarah Von Recafeld	Project Number:	1801614.054521				
Address:	2121 N. California Blvd	Project Manager:	Alex Fischl				
	Suite 800	PM Phone #:	(925) 627-4827				
	Walnut Creek	Field Contact:	Brian Martash				
	CA	Field Contact #:	(323) 304-4969				
	94596	Lab Name:	GEL Laboratories, LLC				
Email:	sarah.vonrecafeld@mwhglobal.com	Lab Contact:	Jackie Trudell				
	sean.leffer@mwhglobal.com	Lab Address:	2040 Savage Road				
		Lab Phone:	Charleston, SC 29407				
			(843) 769-7388				
Sample Name	Matrix	Date	Time	No. of Containers	Requested Analytes	Requested Analytes	Comments
ILBS0077S001	Soil	6/3/09	10:00	4	VOC by SW62808 - Water	VOC by SW62808 - Soil	
ILBS0077S002	Soil	6/3/2009	10:15	4	TPH by SW60158M - Water	TPH by SW60158M - Soil	
ILBS0233S001	Soil	6/3/2009	10:35	1	SVOCs by SW6270C SIM - Water	SVOCs by SW6270C SIM - Soil	
ILBS0233S002	Soil	6/3/2009	11:00	1	PCB by SW6082 - Water	PCB by SW6082 - Soil	
ILBS0233S001	Soil	6/3/2009	11:15	1	Metals 7471A Water Mercury	Metals 7470A Water Mercury	
ILBS0233S002	Soil	6/3/2009	11:20	1	Metals 6020 Zn Water	Metals 6020 Water Lead	
ILBS0233S001	Soil	6/3/2009	12:20	1	Metals 6020 Water Arsenic	Metals 6020 Soil Zinc	
ILBS0233S002	Soil	6/3/2009	12:30	1	Metals 6020 Soil Selenium	Metals 6020 Soil Lead	
ILBS0233S001	Soil	6/3/2009	12:45	1	Metals 6020 Soil Copper	Metals 6020 Soil Cadmium	
ILBS0233S002	Soil	6/3/2009	13:00	1	Metals 6020 Soil Arsenic	Metals 6020 Se Water	
ILBS0248S001	Soil	6/3/2009	13:00	1	Metals 6020 Cu Water	Metals 6020 Cd Water	
					Metals 6020 Be Water	Metals 6020 Be Soil	
					Metals 6010B Water Aluminum	Metals 6010B Soil Aluminum	
					D2216 Moisture Soil		

1. Requisitioned by:	Date:	2. Received by:	Date:	3. Requisitioned by:	Date:	4. Received by:	Date:
<i>[Signature]</i>	6-3-09	<i>R.M. Stelling</i>	6/4/09	<i>[Signature]</i>		<i>[Signature]</i>	
Company: MWH	Time: 1:51P	Company: GEL	Time: 9:45	Company:	Time:	Company:	Time:

Instructions/TAT	Legend	Comments
Numerical values for analyses equals to turn around time in days	H - Hold EH - Extract & Hold	

Geotracker EDF   
Data Validation Package  Level IV

① SWP 06/08/09  
② SWP 06/09/09



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

**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)

### 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)	--	--	--

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# **Case Narrative**

**Case Narrative  
for  
Boeing - SSFL (MWH)  
Work Order: 231342  
SDG: 231342H**

**June 22, 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 June 04, 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>
231342001	B1BS0080S002
231342002	B1BS0078S002
231342003	B1BS0077S002

**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: GC/MS Volatile.

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.



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 18 June 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: 231342H

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: 231342H  
Project Manager: Dixie Hambrick  
Matrix: soil  
QC Level: V  
No. of Samples: 3  
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>
B1BS0077S002	231342003	N/A	Soil	6/3/2009 10:15:00 AM	8260B
B1BS0078S002	231342002	N/A	Soil	6/3/2009 9:40:00 AM	8260B
B1BS0080S002	231342001	N/A	Soil	6/3/2009 7:50:00 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.

### 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.	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 8260B—Volatile Organic Compounds (VOCs)

Reviewed By: P. Meeks  
Date Reviewed: July 6, 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 soil samples were 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: The method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Chloroethane was recovered above the control limit in the LCS only. 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 not performed on a sample from this SDG. Evaluation of method accuracy and precision was based on the LCS/LCSD 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: B1TB2008T01 (230952) was identified as the trip blank. There were no detects above the MDL in the trip blank.
  - Field Blanks and Equipment Rinsates: FBQW2231 (230761) was the field blank and EBQW2217 (230952) was the equipment rinsate associated with the soil samples in this SDG. Chloroform was detected in the field blank at 0.373 µg/L but was not detected in the site samples. There were no other detects above the MDL in the field QC sample.
  - 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 reported by the laboratory for this SDG.
- System Performance: Review is not applicable at a Level V validation.

# Validated Sample Result Forms: 231342H

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Sample Name	B1BS0077S002	Matrix Type:	Soil	Result Type:	Primary			
Lab Sample Name:	231342003	Sample	6/3/2009 10:15:00 AM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1.01	1.01	0.304	ug/kg	U	U	
1,1,1-Trichloroethane	71556	1.01	1.01	0.304	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79345	1.01	1.01	0.304	ug/kg	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	5.06	5.06	1.62	ug/kg	U	U	
1,1,2-Trichloroethane	79005	1.01	1.01	0.304	ug/kg	U	U	
1,1-Dichloroethane	75343	1.01	1.01	0.304	ug/kg	U	U	
1,1-Dichloroethene	75354	1.01	1.01	0.304	ug/kg	U	U	
1,1-Dichloropropene	563586	1.01	1.01	0.304	ug/kg	U	U	
1,2,3-Trichlorobenzene	87616	1.01	1.01	0.304	ug/kg	U	U	
1,2,3-Trichloropropane	96184	1.01	1.01	0.304	ug/kg	U	U	
1,2,4-Trichlorobenzene	120821	1.01	1.01	0.304	ug/kg	U	U	
1,2,4-Trimethylbenzene	95636	1.01	1.01	0.304	ug/kg	U	U	
1,2-Dibromo-3-chloropropane	96128	1.01	1.01	0.506	ug/kg	U	U	
1,2-Dibromoethane (EDB)	106934	1.01	1.01	0.304	ug/kg	U	U	
1,2-Dichlorobenzene	95501	1.01	1.01	0.304	ug/kg	U	U	
1,2-Dichloroethane	107062	1.01	1.01	0.304	ug/kg	U	U	
1,2-Dichloropropane	78875	1.01	1.01	0.304	ug/kg	U	U	
1,3,5-Trimethylbenzene	108678	1.01	1.01	0.304	ug/kg	U	U	
1,3-Dichlorobenzene	541731	1.01	1.01	0.304	ug/kg	U	U	
1,3-Dichloropropane	142289	1.01	1.01	0.304	ug/kg	U	U	
1,4-Dichlorobenzene	106467	1.01	1.01	0.304	ug/kg	U	U	
2,2-dichloropropane	594207	1.01	1.01	0.304	ug/kg	U	U	
2-Butanone (MEK)	78933	11.7	5.06	1.27	ug/kg			
2-Chloro-1,1,1-trifluoroethane	75887	10.1	10.1	3.04	ug/kg	U	U	
2-Chloroethyl vinyl ether	110758	5.06	5.06	1.27	ug/kg	U	U	
2-Chlorotoluene	95498	1.01	1.01	0.304	ug/kg	U	U	
2-Hexanone	591786	5.06	5.06	1.52	ug/kg	U	U	
4-Chlorotoluene	106434	1.01	1.01	0.304	ug/kg	U	U	
4-Methyl-2-pentanone (MIBK)	108101	5.06	5.06	1.27	ug/kg	U	U	
Acetone	67641	61.5	5.06	1.68	ug/kg			
Benzene	71432	1.01	1.01	0.304	ug/kg	U	U	
Bromobenzene	108861	1.01	1.01	0.304	ug/kg	U	U	
Bromochloromethane	74975	1.01	1.01	0.304	ug/kg	U	U	
Bromodichloromethane	75274	1.01	1.01	0.304	ug/kg	U	U	
Bromoform	75252	1.01	1.01	0.304	ug/kg	U	U	

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Bromomethane	74839	1.01	1.01	0.304	ug/kg	U	U
Carbon Tetrachloride	56235	1.01	1.01	0.304	ug/kg	U	U
Chlorobenzene	108907	1.01	1.01	0.304	ug/kg	U	U
Chloroethane	75003	1.01	1.01	0.304	ug/kg	U	U
Chloroform	67663	1.01	1.01	0.304	ug/kg	U	U
Chloromethane	74873	1.01	1.01	0.304	ug/kg	U	U
Chlorotrifluoroethylene	79389	10.1	10.1	3.04	ug/kg	U	U
cis-1,2-Dichloroethene	156592	1.01	1.01	0.304	ug/kg	U	U
cis-1,3-Dichloropropene	10061015	1.01	1.01	0.304	ug/kg	U	U
Dibromochloromethane	124481	1.01	1.01	0.304	ug/kg	U	U
Dibromomethane	74953	1.01	1.01	0.304	ug/kg	U	U
Dichlorodifluoromethane	75718	1.01	1.01	0.304	ug/kg	U	U
Ethylbenzene	100414	1.01	1.01	0.304	ug/kg	U	U
Hexachlorobutadiene	87683	1.01	1.01	0.304	ug/kg	U	U
Isopropylbenzene	98828	1.01	1.01	0.304	ug/kg	U	U
m,p-Xylenes	136777612	0.427	2.03	0.304	ug/kg	J	J
Methylene chloride	75092	5.06	5.06	2.03	ug/kg	U	U
Methyl-tert-butyl ether (MTBE)	1634044	1.01	1.01	0.304	ug/kg	U	U
n-Butylbenzene	104518	1.01	1.01	0.304	ug/kg	U	U
n-Propylbenzene	103651	1.01	1.01	0.304	ug/kg	U	U
o-Xylene	95476	1.01	1.01	0.304	ug/kg	U	U
p-Isopropyltoluene	99876	1.01	1.01	0.304	ug/kg	U	U
sec-Butylbenzene	135988	1.01	1.01	0.304	ug/kg	U	U
Styrene	100425	0.819	1.01	0.304	ug/kg	J	J
tert-Butylbenzene	98066	1.01	1.01	0.304	ug/kg	U	U
Tetrachloroethene	127184	1.01	1.01	0.304	ug/kg	U	U
Toluene	108883	0.538	1.01	0.304	ug/kg	J	J
trans-1,2-Dichloroethene	156605	1.01	1.01	0.304	ug/kg	U	U
trans-1,3-Dichloropropene	10061026	1.01	1.01	0.304	ug/kg	U	U
Trichloroethene	79016	1.01	1.01	0.304	ug/kg	U	U
Trichlorofluoromethane	75694	1.01	1.01	0.577	ug/kg	U	U
Vinyl chloride	75014	1.01	1.01	0.304	ug/kg	U	U

## Analysis Method 8260B

Sample Name	B1BS0078S002	Matrix Type:	Soil	Result Type:	Primary			
Lab Sample Name:	231342002	Sample	6/3/2009 9:40:00 AM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1.07	1.07	0.322	ug/kg	U	U	
1,1,1-Trichloroethane	71556	1.07	1.07	0.322	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79345	1.07	1.07	0.322	ug/kg	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	5.37	5.37	1.72	ug/kg	U	U	
1,1,2-Trichloroethane	79005	1.07	1.07	0.322	ug/kg	U	U	
1,1-Dichloroethane	75343	1.07	1.07	0.322	ug/kg	U	U	
1,1-Dichloroethene	75354	1.07	1.07	0.322	ug/kg	U	U	
1,1-Dichloropropene	563586	1.07	1.07	0.322	ug/kg	U	U	
1,2,3-Trichlorobenzene	87616	1.07	1.07	0.322	ug/kg	U	U	
1,2,3-Trichloropropane	96184	1.07	1.07	0.322	ug/kg	U	U	
1,2,4-Trichlorobenzene	120821	1.07	1.07	0.322	ug/kg	U	U	
1,2,4-Trimethylbenzene	95636	1.07	1.07	0.322	ug/kg	U	U	
1,2-Dibromo-3-chloropropane	96128	1.07	1.07	0.537	ug/kg	U	U	
1,2-Dibromoethane (EDB)	106934	1.07	1.07	0.322	ug/kg	U	U	
1,2-Dichlorobenzene	95501	1.07	1.07	0.322	ug/kg	U	U	
1,2-Dichloroethane	107062	1.07	1.07	0.322	ug/kg	U	U	
1,2-Dichloropropane	78875	1.07	1.07	0.322	ug/kg	U	U	
1,3,5-Trimethylbenzene	108678	1.07	1.07	0.322	ug/kg	U	U	
1,3-Dichlorobenzene	541731	1.07	1.07	0.322	ug/kg	U	U	
1,3-Dichloropropane	142289	1.07	1.07	0.322	ug/kg	U	U	
1,4-Dichlorobenzene	106467	1.07	1.07	0.322	ug/kg	U	U	
2,2-dichloropropane	594207	1.07	1.07	0.322	ug/kg	U	U	
2-Butanone (MEK)	78933	5.37	5.37	1.34	ug/kg	U	U	
2-Chloro-1,1,1-trifluoroethane	75887	10.7	10.7	3.22	ug/kg	U	U	
2-Chloroethyl vinyl ether	110758	5.37	5.37	1.34	ug/kg	U	U	
2-Chlorotoluene	95498	1.07	1.07	0.322	ug/kg	U	U	
2-Hexanone	591786	5.37	5.37	1.61	ug/kg	U	U	
4-Chlorotoluene	106434	1.07	1.07	0.322	ug/kg	U	U	
4-Methyl-2-pentanone (MIBK)	108101	5.37	5.37	1.34	ug/kg	U	U	
Acetone	67641	5.37	5.37	1.78	ug/kg	U	U	
Benzene	71432	1.07	1.07	0.322	ug/kg	U	U	
Bromobenzene	108861	1.07	1.07	0.322	ug/kg	U	U	
Bromochloromethane	74975	1.07	1.07	0.322	ug/kg	U	U	
Bromodichloromethane	75274	1.07	1.07	0.322	ug/kg	U	U	
Bromoform	75252	1.07	1.07	0.322	ug/kg	U	U	

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Bromomethane	74839	1.07	1.07	0.322 ug/kg	U	U
Carbon Tetrachloride	56235	1.07	1.07	0.322 ug/kg	U	U
Chlorobenzene	108907	1.07	1.07	0.322 ug/kg	U	U
Chloroethane	75003	1.07	1.07	0.322 ug/kg	U	U
Chloroform	67663	1.07	1.07	0.322 ug/kg	U	U
Chloromethane	74873	1.07	1.07	0.322 ug/kg	U	U
Chlorotrifluoroethylene	79389	10.7	10.7	3.22 ug/kg	U	U
cis-1,2-Dichloroethene	156592	1.07	1.07	0.322 ug/kg	U	U
cis-1,3-Dichloropropene	10061015	1.07	1.07	0.322 ug/kg	U	U
Dibromochloromethane	124481	1.07	1.07	0.322 ug/kg	U	U
Dibromomethane	74953	1.07	1.07	0.322 ug/kg	U	U
Dichlorodifluoromethane	75718	1.07	1.07	0.322 ug/kg	U	U
Ethylbenzene	100414	1.07	1.07	0.322 ug/kg	U	U
Hexachlorobutadiene	87683	1.07	1.07	0.322 ug/kg	U	U
Isopropylbenzene	98828	1.07	1.07	0.322 ug/kg	U	U
m,p-Xylenes	136777612	2.15	2.15	0.322 ug/kg	U	U
Methylene chloride	75092	5.37	5.37	2.15 ug/kg	U	U
Methyl-tert-butyl ether (MTBE)	1634044	1.07	1.07	0.322 ug/kg	U	U
n-Butylbenzene	104518	1.07	1.07	0.322 ug/kg	U	U
n-Propylbenzene	103651	1.07	1.07	0.322 ug/kg	U	U
o-Xylene	95476	1.07	1.07	0.322 ug/kg	U	U
p-Isopropyltoluene	99876	1.07	1.07	0.322 ug/kg	U	U
sec-Butylbenzene	135988	1.07	1.07	0.322 ug/kg	U	U
Styrene	100425	1.04	1.07	0.322 ug/kg	J	J
tert-Butylbenzene	98066	1.07	1.07	0.322 ug/kg	U	U
Tetrachloroethene	127184	1.07	1.07	0.322 ug/kg	U	U
Toluene	108883	1.07	1.07	0.322 ug/kg	U	U
trans-1,2-Dichloroethene	156605	1.07	1.07	0.322 ug/kg	U	U
trans-1,3-Dichloropropene	10061026	1.07	1.07	0.322 ug/kg	U	U
Trichloroethene	79016	1.07	1.07	0.322 ug/kg	U	U
Trichlorofluoromethane	75694	1.07	1.07	0.613 ug/kg	U	U
Vinyl chloride	75014	1.07	1.07	0.322 ug/kg	U	U

# Analysis Method 8260B

Sample Name	B1BS0080S002	Matrix Type:	Soil	Result Type:	Primary			
Lab Sample Name:	231342001	Sample	6/3/2009 7:50:00 AM	Validation	V			
Analyte	CAS No	Result Value	RL	MDL	Result	Lab Qualifier	Validation	Validation Notes
1,1,1,2-Tetrachloroethane	630206	1.06	1.06	0.318	ug/kg	U	U	
1,1,1-Trichloroethane	71556	1.06	1.06	0.318	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79345	1.06	1.06	0.318	ug/kg	U	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	5.3	5.3	1.69	ug/kg	U	U	
1,1,2-Trichloroethane	79005	1.06	1.06	0.318	ug/kg	U	U	
1,1-Dichloroethane	75343	1.06	1.06	0.318	ug/kg	U	U	
1,1-Dichloroethene	75354	1.06	1.06	0.318	ug/kg	U	U	
1,1-Dichloropropene	563586	1.06	1.06	0.318	ug/kg	U	U	
1,2,3-Trichlorobenzene	87616	1.06	1.06	0.318	ug/kg	U	U	
1,2,3-Trichloropropane	96184	1.06	1.06	0.318	ug/kg	U	U	
1,2,4-Trichlorobenzene	120821	1.06	1.06	0.318	ug/kg	U	U	
1,2,4-Trimethylbenzene	95636	0.392	1.06	0.318	ug/kg	J	J	
1,2-Dibromo-3-chloropropane	96128	1.06	1.06	0.53	ug/kg	U	U	
1,2-Dibromoethane (EDB)	106934	1.06	1.06	0.318	ug/kg	U	U	
1,2-Dichlorobenzene	95501	1.06	1.06	0.318	ug/kg	U	U	
1,2-Dichloroethane	107062	1.06	1.06	0.318	ug/kg	U	U	
1,2-Dichloropropane	78875	1.06	1.06	0.318	ug/kg	U	U	
1,3,5-Trimethylbenzene	108678	1.06	1.06	0.318	ug/kg	U	U	
1,3-Dichlorobenzene	541731	1.06	1.06	0.318	ug/kg	U	U	
1,3-Dichloropropane	142289	1.06	1.06	0.318	ug/kg	U	U	
1,4-Dichlorobenzene	106467	1.06	1.06	0.318	ug/kg	U	U	
2,2-dichloropropane	594207	1.06	1.06	0.318	ug/kg	U	U	
2-Butanone (MEK)	78933	5.3	5.3	1.32	ug/kg	U	U	
2-Chloro-1,1,1-trifluoroethane	75887	10.6	10.6	3.18	ug/kg	U	U	
2-Chloroethyl vinyl ether	110758	5.3	5.3	1.32	ug/kg	U	U	
2-Chlorotoluene	95498	1.06	1.06	0.318	ug/kg	U	U	
2-Hexanone	591786	5.3	5.3	1.59	ug/kg	U	U	
4-Chlorotoluene	106434	1.06	1.06	0.318	ug/kg	U	U	
4-Methyl-2-pentanone (MIBK)	108101	5.3	5.3	1.32	ug/kg	U	U	
Acetone	67641	5.3	5.3	1.76	ug/kg	U	U	
Benzene	71432	0.334	1.06	0.318	ug/kg	J	J	
Bromobenzene	108861	1.06	1.06	0.318	ug/kg	U	U	
Bromochloromethane	74975	1.06	1.06	0.318	ug/kg	U	U	
Bromodichloromethane	75274	1.06	1.06	0.318	ug/kg	U	U	
Bromoform	75252	1.06	1.06	0.318	ug/kg	U	U	

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Bromomethane	74839	1.06	1.06	0.318	ug/kg	U	U
Carbon Tetrachloride	56235	1.06	1.06	0.318	ug/kg	U	U
Chlorobenzene	108907	1.06	1.06	0.318	ug/kg	U	U
Chloroethane	75003	1.06	1.06	0.318	ug/kg	U	U
Chloroform	67663	1.06	1.06	0.318	ug/kg	U	U
Chloromethane	74873	1.06	1.06	0.318	ug/kg	U	U
Chlorotrifluoroethylene	79389	10.6	10.6	3.18	ug/kg	U	U
cis-1,2-Dichloroethene	156592	1.06	1.06	0.318	ug/kg	U	U
cis-1,3-Dichloropropene	10061015	1.06	1.06	0.318	ug/kg	U	U
Dibromochloromethane	124481	1.06	1.06	0.318	ug/kg	U	U
Dibromomethane	74953	1.06	1.06	0.318	ug/kg	U	U
Dichlorodifluoromethane	75718	1.06	1.06	0.318	ug/kg	U	U
Ethylbenzene	100414	0.538	1.06	0.318	ug/kg	J	J
Hexachlorobutadiene	87683	1.06	1.06	0.318	ug/kg	U	U
Isopropylbenzene	98828	1.06	1.06	0.318	ug/kg	U	U
m,p-Xylenes	136777612	1.49	2.12	0.318	ug/kg	J	J
Methylene chloride	75092	5.3	5.3	2.12	ug/kg	U	U
Methyl-tert-butyl ether (MTBE)	1634044	1.06	1.06	0.318	ug/kg	U	U
n-Butylbenzene	104518	1.06	1.06	0.318	ug/kg	U	U
n-Propylbenzene	103651	1.06	1.06	0.318	ug/kg	U	U
o-Xylene	95476	1.06	1.06	0.318	ug/kg	U	U
p-Isopropyltoluene	99876	1.06	1.06	0.318	ug/kg	U	U
sec-Butylbenzene	135988	1.06	1.06	0.318	ug/kg	U	U
Styrene	100425	0.927	1.06	0.318	ug/kg	J	J
tert-Butylbenzene	98066	1.06	1.06	0.318	ug/kg	U	U
Tetrachloroethene	127184	1.06	1.06	0.318	ug/kg	U	U
Toluene	108883	6.45	1.06	0.318	ug/kg		
trans-1,2-Dichloroethene	156605	1.06	1.06	0.318	ug/kg	U	U
trans-1,3-Dichloropropene	10061026	1.06	1.06	0.318	ug/kg	U	U
Trichloroethene	79016	1.06	1.06	0.318	ug/kg	U	U
Trichlorofluoromethane	75694	1.06	1.06	0.604	ug/kg	U	U
Vinyl chloride	75014	1.06	1.06	0.318	ug/kg	U	U

# **Chain of Custody and Supporting Documentation**

23266A

COC #:

CHAIN OF CUSTODY RECORD



Customer Information		Project Information				Project Information	
Site:	SSFL	Client Name:	Boeing	Collector:	Alison Ruotolo	Boeing PM:	
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009	Contact #:			
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521	Requested Analyses			
Address:	2121 N. California Blvd	Project Manager:	Dixie Hambrick	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.			
	Suite 600	PM Phone #:	(626) 568-6348				
	Walnut Creek	Field Contact:	Shelby Valenzuela				
	CA	Field Contact #:	(626) 255-0503				
	94596	Lab Name:	GEL Laboratories, LLC				
Email:	sarah.vonraesfeld@mwhglobal.com	Lab Contact:	Jackie Trudell	Dioxin by 1613B - Soil	10	10	
	sean.leffler@mwhglobal.com	Lab Address:	2040 Savage Road	D2216 Moisture Soil	10	10	
		Lab Phone:	Charleston, SC 29407		10	10	
			(843) 769-7388		10	10	
Sample Name	Matrix	Date	Time	No. of Containers	Comments		
B1BS0091S001 ✓	Soil	6/30/2009	12:13	1			
B1BS0092D001 ✓	Soil	6/30/2009	10:33	1			
B1BS0092S001 ✓	Soil	6/30/2009	10:33	1			
B1BS0093S001 ✓	Soil	6/30/2009	11:23	1			
B1BS0094S001 ✓	Soil	6/30/2009	11:00	1			
B1BS0096S001 ✓	Soil	6/30/2009	11:49	1			

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	4. Received by:	Date:
	6/30/09		7/1/09				
Company:	Time:	Company:	Time:	Company:	Time:	Company:	Time:
MWH	1530		900				
Comments:							
<input type="checkbox"/> Geotracker EDF <input checked="" type="checkbox"/> Data Validation Package							





# SAMPLE RECEIPT & REVIEW FORM

Client: SSFL SDG/ARCOC/Work Order: 232668

Received By: RMS Date Received: 7/1/09

<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*:
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	<u>30cpm</u>
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>2°</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:
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:  
Fx: 9457 3161 5409

**Requesting Firm: MWH**  
**Address: 2121 No. California Blvd.**  
**Walnut Creek, CA 94596**  
**Phone: 925-627-4654**  
**Fax: 925-627-4501**  
**E-mail: Sarah.VonRaesfeld@mwhglobal.com**

Date: 07/01/09

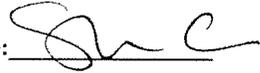
To: Jackie Trudell

Phone: 843-769-7388

Laboratory GEL Laboratories, LLC

E-mail: jacqueline.trudell@gel.com

From: Sarah Von Raesfeld

Requestor signature: 

Subject: Chain-of-Custody Form Analytical Request Change No. of Pages: 8

**Per Request:**

Please make the changes listed below to the chain-of-custody analytical request form. Include this form with the final deliverables for these samples.

COC No.	Client Sample ID(s)	Date Collected	Originally Requested Analyses	Change (s) and Method (s) Now Requested
MWHBM20090601_00	HZBS0109S001	06/01/09		Run dioxins and % moisture
MWHBM20090602_00	ENBS0082S001 ENBS0083S001 ENBS0084S001	06/02/09		Run SVOC SIM
MWHBM20090603_00	BIBS0080S002	06/03/09		Run TPH and % moisture
MWHBM20090603_00	ILBS0249S002 ILBS0250S001 ILBS0251S001 ILBS0253S001	06/03/09		Run PCBs
MWHBM20090603_00	ILBS0251S002	06/03/09		Run mercury, zinc, and % moisture

The reason for these changes:

*Incorrectly marked on COC form*

*Lack of sample volume*

*Change in analytical request*

*Other:*

\_\_\_\_\_

\_\_\_\_\_

X

\_\_\_\_\_

\_\_\_\_\_

Thank you

2307617

CHAIN OF CUSTODY RECORD

COC #: MWVBM20090601\_00  
Page: 1 of 2

Customer Information				Project Information			
Site:	S8FL	Client Name:	Boeing	Collector:	B. Marasin	Boeing PM:	
Company:	MWV	Sampling Event:	ISRA Sampling, June 2009	Contact #:			
Report to:	Sarah Von Reesfeld	Project Number:	1891614.054621				
Address:	2121 N. California Blvd	Project Manager:	Alex Fitch				
	Suite 600	PIH Phone #:	(926) 627-4627				
	Walnut Creek	Field Contact:	Brian Marasin				
	CA	Field Contact #:	(323) 304-4989				
	94596	Lab Name:	GEL Laboratories, LLC				
Email:	sarah.vonreesfeld@mwvglobal.com	Lab Contact:	Cheryl Jones				
	sean.jeff@mwvglobal.com	Lab Address:	2040 Savage Road				
		Lab Phone:	Charleston, SC 29407				
			(843) 769-7388				
Sample Name	Matrix	Date	Time	No. of Containers	Requested Analysis	Instructions/TAT	Comments
HZB60133D001	Soil	6/1/2009	0:00	1	VOC by SW62808 - Water	Legend: Numerical values for analyses equates to turn around time in days H - Hold EH - Extract & Hold	
HZB601196001	Soil	6/1/2009	0:00	1	TPH by SW60158M - Water		
HZB601063001	Soil	6/1/2009	0:00	1	SVOCs by SW6270C SIM - Water		
HZB601148001	Soil	6/1/2009	0:18	1	PCB by SW6082 - Water		
HZB601063001	Soil	6/1/2009	0:25	1	Metals 7470A Water Mercury		
HZB601118001	Soil	6/1/2009	0:25	1	Metals 6020 Zn Water		
HZB601178001	Soil	6/1/2009	0:41	1	Metals 6020 Water Lead		
HZB601196001	Soil	6/1/2009	0:55	1	Metals 6020 Water Arsenic		
HZB601206001	Soil	6/1/2009	0:03	1	Metals 6020 Soil Lead		
HZB601218001	Soil	6/1/2009	0:15	1	Metals 6020 Soil Copper		
					Metals 6020 Se Water		
					Metals 6020 Cu Water		
					Metals 6020 Cd Water		
					Metals 6020 Be Water		
					Metals 6010B Water Aluminum		
					Dioxin by 1613B - Water		
					Dioxin by 1613B - Soil		
					D2216 Moisture Soil		

1. Relinquished by:		2. Received by:		3. Relinquished by:		4. Received by:	
Date:	6-1-09	Date:	6/2/09	Date:		Date:	
Time:	16:15	Company:	G.M. Stollery	Time:		Company:	
Company:	MWV	Company:	GEL	Company:		Company:	
Comments:							

① Cancel analysis SWL 04/08/09  
② SWL 07/01/09



2308597



CHAIN OF CUSTODY RECORD

COC #: MWHBM20090602\_00

Page: 1 of 2

Customer Information		Project Information				Project Information	
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martasin	Boeing PM:	
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009	Contact #:			
Report to:	Sarah Von Reesfeld	Project Number:	1891614.054521	Requested Analyses			
Address:	2121 N. California Blvd	Project Manager:	Alex Fisch	Dioxin by 1613B - Water			
	Suite 600	PM Phone #:	(925) 627-4827	Dioxin by 1613B - Soil			
	Walnut Creek	Field Contact:	Brian Martasin	Metals 6020 Soil Lead			
	CA	Field Contact #:	(323) 304-4969	Metals 6020 Soil Copper			
	94596	Lab Name:	GEL Laboratories, LLC	Metals 6020 Soil Cadmium			
Email:	sarah.vonreesfeld@mwhglobal.c	Lab Contact:	Jackie Trudell	Metals 6020 Cu Water			
	sean.leffler@mwhglobal.com	Lab Address:	2040 Savage Road	Metals 6020 Cd Water			
		Lab Phone:	Charleston, SC 29407	Metals 7470A Water Mercury			
			(843) 769-7388	Metals 7471A Soil Mercury			
				Metals 6020 Water Lead			
Sample Name	Matrix	Date	Time	No. of Containers	Instructions/TAT		
A1BS0056S001 ✓	Soil	6/2/2009	7:55	1			
A1BS0057S001 ✓	Soil	6/2/2009	8:05	1			
A1BS0058S001 ✓	Soil	6/2/2009	12:15	1			
A1BS0059S001 ✓	Soil	6/2/2009	12:27	1			
A1BS0060S001 ✓	Soil	6/2/2009	12:40	1			
A1BS0061S001 ✓	Soil	6/2/2009	12:50	1			
A1BS0062S001 ✓	Soil	6/2/2009	13:05	1			
EBQW2216 ✓	Water	6/2/2009	14:05	3			
ENBS0080S001 ✓	Soil	6/2/2009	10:52	1			
ENBS0081S001 ✓	Soil	6/2/2009	11:03	1			
1. Relinquished by:		Date:	2. Received by:		Date:	3. Relinquished by:	
B. R.		6-2-09	R.M. Stelling			6/3/09	
Company:	MWH	Time:	1455	Company:	Gel	Time:	9:15
4. Received by:		Date:	Company:		Time:		

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.

Geotracker EDF   
 Data Validation Package  Level IV

① Cancel analysis SR 06/08/09

2308597

COC #:

CHAIN OF CUSTODY RECORD

Customer Information		Project Information				Project Information	
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martasin	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	Dioxin by 1613B - Soil	10	10	Instructions/TAT 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.
	Suite 600	PM Phone #:	(925) 627-4627	Dioxin by 1613B - Water			
	Walnut Creek	Field Contact:	Brian Martasin	Metals 6020 Soil Lead	10	10	
	CA	Field Contact #:	(323) 304-4966	Metals 6020 Soil Copper	10	10	
	94596	Lab Name:	GEL Laboratories, LLC	Metals 6020 Soil Cadmium			
Email:	sarah.vonraesfeld@mwhglobal.com	Lab Contact:	Jackie Trudell	Metals 6020 Cu Water			
	sean.leffler@mwhglobal.com	Lab Address:	2040 Savage Road	Metals 6020 Cd Water			
		Lab Phone:	Charleston, SC 29407	Metals 7470A Water Mercury			
			(843) 769-7388	Metals 7471A Soil Mercury			
				Metals 6020 Water Lead			
Sample Name	Matrix	Date	Time	No. of Containers			Comments
ENBS0062S001	Soil	6/2/2009	9:47	1			
ENBS0083S001	Soil	6/2/2009	10:05	1			
ENBS0064S001	Soil	6/2/2009	10:17	1			
ENBS0065S001	Soil	6/2/2009	8:40	1			
ENBS0066S001	Soil	6/2/2009	8:50	1			
ENBS0087S001	Soil	6/2/2009	9:06	1			
ENBS0088S001	Soil	6/2/2009	9:20	1			

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	4. Received by:	Date:
B. R.	6-2-09	L.M. Stelling	6/3/09				
Company:	Time:	Company:	Time:	Company:	Time:	Company:	Time:
MWH	1455	GEL	9:15				
Comments:	<input type="checkbox"/> Geotracker EDF <input checked="" type="checkbox"/> Data Validation Package <input type="checkbox"/> Level IV						

② SWL 07/01/09

2309521



CHAIN OF CUSTODY RECORD

COC #: MWH-BM20090603\_00  
Page: 1 of 3

Customer Information		Project Information		Boeing PM:	
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martash
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009	Contact #:	
Report to:	Sarah Von Raasfeld	Project Number:	1891614.064521		
Address:	2121 N. California Blvd	Project Manager:	Alex Fisch		
	Suite 600	PM Phone #:	(925) 927-4627		
	Walnut Creek	Field Contact:	Brian Mantash		
	CA	Field Contact #:	(323) 304-4969		
	94596	Lab Name:	GEL Laboratories, LLC		
Email:	sarah.vonraasfeld@mwhglobal.com	Lab Contact:	Jackie Trudell		
	jean.keller@mwhglobal.com	Lab Address:	2040 Savage Road		
		Lab Phone:	Charleston, SC 29407		
			(843) 769-7388		

Sample Name	Matrix	Date	Time	No. of Containers	Requested Analysis	Instructions/TAT	Comments
B1850040001	Soil	6/2/09	9:00	4	Metals 6020 Soil Lead		
B117820081001	Water	6/2/09	7:00	3	Metals 6020 Water Lead		
B1850080001	Soil	6/2/09	7:43	4	Metals 6020 Soil Zinc		
B1850040002	Soil	6/2/09	7:50	4	Metals 6020 Soil Selenium		
B18500818001	Soil	6/2/09	8:30	1	Metals 6020 Soil Copper		
B18500818002	Soil	6/2/09	8:40	1	Metals 6020 Soil Cadmium		
B18500813001	Soil	6/2/09	8:55	1	Metals 6020 Soil Arsenic		
B18500415001	Soil	6/2/09	9:20	1	Metals 6020 Se Water		
B18500785001	Soil	6/2/09	9:35	4	Metals 6020 Cu Water		
B18500785002	Soil	6/2/09	9:40	4	Metals 6020 Cd Water		
					Metals 6020 Be Water		
					Metals 6020 Be Soil		
					Metals 6010B Water Aluminum		
					Metals 6010B Soil Aluminum		
					D2216 Moisture Soil		
					PCB by SW6062 - Water		
					PCB by SW6062 - Soil		
					Metals 7471A Soil Mercury		
					Metals 7470A Water Mercury		
					Metals 6020 Zn Water		
					Metals 6020 Water Lead		
					Metals 6020 Water Arsenic		
					Metals 6020 Soil Zinc		
					Metals 6020 Soil Selenium		
					Metals 6020 Soil Lead		
					Metals 6020 Soil Copper		
					Metals 6020 Soil Cadmium		
					Metals 6020 Soil Arsenic		
					Metals 6020 Se Water		
					Metals 6020 Cu Water		
					Metals 6020 Cd Water		
					Metals 6020 Be Water		
					Metals 6020 Be Soil		
					VOC by SW6260B - Water		
					VOC by SW6260B - Soil		
					TPH by SW60158M - Water		
					TPH by SW60158M - Soil		
					SVOCs by SW6270C SIM - Water		
					SVOCs by SW6270C SIM - Soil		

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	4. Received by:	Date:
<i>[Signature]</i>	6-3-09	<i>[Signature]</i>	6/4/09				
Company: MWH	Time: 1515	Company: GEL	Time: 905	Company:	Time:	Company:	Time:

Geotracker EDF  Data Validation Package  Level IV

② SWL 06/09/09  
③ SWL 07/01/09

2309521

CHAIN OF CUSTODY RECORD

COC #: MWHBM20090603\_00 Page: 2 of 3

Customer Information				Project Information			
Site:	SSFL	Client Name:	Boeing	Collector:	B. Marrasin	Booking PM:	
Company:	MWH	Sampling Event:	ISRA Sampling June 2008	Contact #:			
Report to:	Sarah Von Raastfeld	Project Number:	18916-14-054521				
Address:	2121 N. California Blvd	Project Manager:	Alex Fisch				
	Suite 800	PM Phone #:	(925) 827-4827				
	Walnut Creek	Field Contact:	Brian Marrasin				
	CA	Field Contact #:	(323) 304-4989				
	94598	Lab Name:	GEL Laboratories, LLC				
	sarah.vonraastfeld@mwhglobal.com	Lab Contact:	Jackie Trudell				
	seen.jeffrey@mwhglobal.com	Lab Address:	2040 Seavage Road				
		Lab Phone:	Charleston, SC 29407				
			(843) 768-7388				
Sample Name	Matrix	Date	Time	No. of Containers	Requested Analyses	Requested Analyses	Comments
✓ 18S00775001	Soil	6/2/2009	10:00	4	D2216 Mixture Soil		
✓ 18S00775002	Soil	6/2/2009	10:15	4			
✓ 18S02538001	Soil	6/2/2009	10:45	1			
✓ 18S02538002	Soil	6/2/2009	11:00	1			
✓ 18S03518001	Soil	6/2/2009	11:15	1			
✓ 18S02518002	Soil	6/2/2009	11:20	1			
✓ 18S02518001	Soil	6/2/2009	12:20	1			
✓ 18S02519002	Soil	6/2/2009	12:30	1			
✓ 18S02406001	Soil	6/2/2009	12:45	1			
✓ 18S02485001	Soil	6/2/2009	13:00	1			

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	4. Received by:	Date:
<i>[Signature]</i>	6-3-09	<i>R.M. Stelling</i>	6/4/09	<i>[Signature]</i>	6/4/09	<i>[Signature]</i>	6/4/09
Company: MWH	Time: 1:55	Company: GEL	Time: 9:45	Company: GEL	Time: 9:45	Company: GEL	Time: 9:45

Geotracker EDF	Data Validation Package	Level IV
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- ① SWL 06/08/09
- ② SWL 06/09/09
- ③ SWL 07/01/09

2309521

CHAIN OF CUSTODY RECORD

Customer Information: SSFL, MWH, Sarah Von Riebold, 2121 N. California Blvd, Suite 600, Walnut Creek, CA 94596, sarah.vonriesbold@mwhglobal.com, sean.jaffer@mwhglobal.com

Project Information: Client Name: Boeing, Sampling Event: ISRA Sampling - June 2009, Project Number: 1091614.054521, PM Phone #: (926) 627-4827, Field Contact: Brian Martasin, Field Contact #: (323) 304-4989, Lab Name: GEL Laboratories, LLC, Lab Contact: Jackie Trudel, Lab Address: 2040 Savage Road, Charleston, SC 29407, Lab Phone: (843) 769-7388

Boeing PM: [Blank]

COC #: MWHBM20090603\_00 Page: 3 of 3

Sample Name	Matrix	Date	Time	No. of Containers	Requested Analytes	Instructions/TAT	Comments
U&S0249802	Soil	6/3/09	13:05	1	Metals 6020 Soil Lead	Metals 6020 Soil Lead	
EBQW2317	Water	6/3/09	13:30	10	Metals 6020 Soil Arsenic	Metals 6020 Soil Arsenic	
					Metals 6020 Soil Cadmium	Metals 6020 Soil Cadmium	
					Metals 6020 Soil Copper	Metals 6020 Soil Copper	
					Metals 6020 Soil Selenium	Metals 6020 Soil Selenium	
					Metals 6020 Soil Zinc	Metals 6020 Soil Zinc	
					Metals 6020 Water Arsenic	Metals 6020 Water Arsenic	
					Metals 6020 Water Lead	Metals 6020 Water Lead	
					Metals 6020 Water Mercury	Metals 6020 Water Mercury	
					Metals 7470A Water Mercury	Metals 7470A Water Mercury	
					PCB by SW8062 - Water	PCB by SW8062 - Water	
					PCB by SW8062 - Soil	PCB by SW8062 - Soil	
					SVOCs by SW8270C SIM - Water	SVOCs by SW8270C SIM - Water	
					SVOCs by SW8270C SIM - Soil	SVOCs by SW8270C SIM - Soil	
					TPH by SW8015BM - Water	TPH by SW8015BM - Water	
					TPH by SW8015BM - Soil	TPH by SW8015BM - Soil	
					VOC by SW8260B - Soil	VOC by SW8260B - Soil	
					VOC by SW8260B - Water	VOC by SW8260B - Water	

1. Relinquished by: [Signature] Date: 6-3-09 Time: 1515 Company: MWH

2. Received by: R.M. Stelling Date: 6/4/09 Time: 945 Company: GEL

3. Relinquished by: [Blank] Date: [Blank] Time: [Blank] Company: [Blank]

4. Received by: [Blank] Date: [Blank] Time: [Blank] Company: [Blank]

Legend: Numerical values for analysis equal to turn around time in days. H - Hold. EH - Extract & Hold.

GeoTracker EDF  Data Validation Package  Level IV

① SW 06/08/09  
③ SW 07/01/09

**Subject:** COCs and hold samples  
**From:** Sarah Von Raesfeld <Sarah.E.VonRaesfeld@us.mwhglobal.com>  
**Date:** Tue, 30 Jun 2009 17:32:16 -0600  
**To:** "jacqueline.trudell@gel.com" <jacqueline.trudell@gel.com>  
**CC:** Sean Leffler <Sean.S.Leffler@us.mwhglobal.com>

Hi Jackie,

Here are the COCs for the samples collected today. I do not expect the field crew to collect any more samples until next Tuesday.

No need to worry about dividing up the samples like I had mentioned earlier, we are just going to run everything in one SDG. Please combine both of the COCs from today with the hold samples listed below.

- ILBS0251S002 - turn on mercury and zinc (this sample was not in my previous email)
- HZBS0109S002 - turn on analysis for dioxins
- ENBS0082S001 - turn on analysis for SVOCs (sample is past HT)
- ENBS0083S001 - turn on analysis for SVOCs (sample is past HT)
- ENBS0084S001 - turn on analysis for SVOCs (sample is past HT)
- B1BS0080S002 - turn on analysis for TPH
- ILBS0249S002 - turn on analysis for PCBs
- ILBS0250S001 - turn on analysis for PCBs
- ILBS0251S001 - turn on analysis for PCBs
- ILBS0253S001 - turn on analysis for PCBs

Thanks,  
Sarah

<b>MWHAR20090630_00.pdf</b>	<b>Content-Description:</b> MWHAR20090630_00.pdf <b>Content-Type:</b> application/pdf <b>Content-Encoding:</b> base64
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<b>MWHSD20090630_00.pdf</b>	<b>Content-Description:</b> MWHSD20090630_00.pdf <b>Content-Type:</b> application/pdf <b>Content-Encoding:</b> base64
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232668H  
 2209527. ST 7/1/09

**CHAIN OF CUSTODY RECORD**

MWHBM20090603\_00  
 Page: 1 of 3

COC #:

Customer Information		Project Information				Boeing PM:		
Site: SSFL	Client Name: Boeing	Collector: B. Mantasir						
Company: MWH	Sampling Event: ISRA Sampling, June 2009	Contact #:						
Report to: Sarah Von Raestfeld	Project Number: 1891614.054521							
Address: 2121 N. California Blvd	Project Manager: Alex Fischl							
Suite 600	PM Phone #: (925) 627-4627							
Walnut Creek	Field Contact: Brian Mantasir							
CA	Field Contact #: (323) 304-4989							
94596	Lab Name: GEL Laboratories, LLC							
Email: sarah.vonraestfeld@mwhglobal.c	Lab Contact: Jackie Trudell							
seen.leffler@mwhglobal.com	Lab Address: 2040 Savage Road							
	Charleston, SC 29407							
	Lab Phone: (843) 769-7388							
Sample Name	Matrix	Date	Time	No. of Containers	Requested Analyses		Instructions/TAT	Comments
B1BS0080001	Soil	8/3/2009	0:00	4	Metals 6020 Zn Water	10		
B1B200301001	Water	8/3/2009	7:00	3	Metals 6020 Water Lead	10		
B1BS00805001	Soil	8/3/2009	7:45	4	Metals 6020 Water Arsenic	10		
B1BS00905002	Soil	8/3/2009	7:50	4	Metals 6020 Soil Zinc	10		
B1BS00825001	Soil	8/3/2009	8:30	1	Metals 6020 Soil Selenium	10		
B1BS00825002	Soil	8/3/2009	8:40	1	Metals 6020 Soil Lead	10		
B1BS00836001	Soil	8/3/2009	8:55	1	Metals 6020 Soil Copper	10		
B1BS00816001	Soil	8/3/2009	9:20	1	Metals 6020 Soil Cadmium	10		
B1BS00785001	Soil	8/3/2009	9:35	4	Metals 6020 Se Water	10		
B1BS00785002	Soil	8/3/2009	9:40	4	Metals 6020 Cu Water	10		
					Metals 6020 Cd Water	10		
					Metals 6020 Be Water	10		
					Metals 6020 Be Soil	10		
					Metals 6010B Water Aluminum	10		
					Metals 6010B Soil Aluminum	10		
					D2216 Moisture Soil	10		
					VOCs by SW8270C SIM - Water	10		
					VOCs by SW8270C SIM - Soil	10		
					PCB by SW8082 - Water	10		
					PCB by SW8082 - Soil	10		
					Metals 7471A Soil Mercury	10		
					Metals 7470A Water Mercury	10		
					TPH by SW8015BM - Water	10		
					TPH by SW8015BM - Soil	10		
					VOC by SW8260B - Water	10		
					VOC by SW8260B - Soil	10		

1. Relinquished by: *[Signature]* Date: 6-3-09  
 2. Received by: *R.M. Stalling* Date: 6/4/09  
 Company: MWH Time: 1515  
 Company: GEL Time: 905  
 3. Relinquished by: *[Signature]* Date: 6/4/09  
 4. Received by: *[Signature]* Date: 6/4/09  
 Company: MWH Time: 1515  
 Company: GEL Time: 905

Geotracker EDF   
 Data Validation Package  Level IV

232668H  
2309527-5T 71169

**CHAIN OF CUSTODY RECORD**

COC #: MWVHM20090903\_00  
Page: 2 of 3

Customer Information				Project Information			
Site:	Client Name:	Boeing	Collector:	B. Mertash			
Company:	Sampling Event:	ISRA Sampling, June 2009	Contact #:				
Report to:	Project Number:	1881614.054521					
Address:	Project Manager:	Alex Fichtl					
Suite 600	PM Phone #:	(925) 627-4927					
Walnut Creek	Field Contact:	Brian Mertash					
CA	Field Contact #:	(323) 304-4988					
94596	Lab Name:	GEL Laboratories, LLC					
Email:	Lab Contact:	Jackie Trudell					
	Lab Address:	2040 Savage Road					
	Lab Address:	Charleston, SC 29407					
	Lab Phone:	(843) 769-7388					
Sample Name	Matrix	Date	Time	No. of Containers			
B18600775001	Soil	6/2/2009	10:00	4			
B18600775002	Soil	6/2/2009	10:15	4			
ILB802535001	Soil	6/2/2009	10:35	1			
ILB802535002	Soil	6/2/2009	11:00	1			
ILB802525001	Soil	6/2/2009	11:15	1			
ILB802525002	Soil	6/2/2009	11:30	1			
ILB802515001	Soil	6/2/2009	12:20	1			
ILB802515002	Soil	6/2/2009	12:30	1			
ILB802508001	Soil	6/2/2009	12:45	1			
ILB802495001	Soil	6/2/2009	13:00	1			

1. Relinquished by:		2. Received by:		3. Relinquished by:		4. Received by:	
Date:	Signature:	Date:	Signature:	Date:	Signature:	Date:	Signature:
6-3-09	<i>B. N. O.</i>	6/2/09	<i>R. M. Stelling</i>	6/2/09	<i>G. J. L.</i>		
Time: 1:55	Company: MWH	Time: 1:55	Company: GEL	Time: 9:45	Company: GEL		

Requested Analyses		Instructions/TAT	
Requested Analyses	Requested Analyses	Instructions/TAT	Comments
VOC by SW8260B - Water	VOC by SW8260B - Soil	10	EH
TPH by SW8015BM - Water	TPH by SW8015BM - Soil	10	EH
SVOCs by SW8270C SIM - Water	SVOCs by SW8270C SIM - Soil	10	EH
PCB by SW8082 - Water	PCB by SW8082 - Soil	10	EH
Metals 7471A Soil Mercury	Metals 7470A Water Mercury	10	EH
Metals 6020 Zn Water	Metals 6020 Water Lead	10	EH
Metals 6020 Water Arsenic	Metals 6020 Soil Zinc	10	EH
Metals 6020 Soil Selenium	Metals 6020 Soil Lead	10	EH
Metals 6020 Soil Copper	Metals 6020 Soil Cadmium	10	EH
Metals 6020 Soil Arsenic	Metals 6020 Se Water	10	EH
Metals 6020 Cu Water	Metals 6020 Cd Water	10	EH
Metals 6020 Be Water	Metals 6020 Be Soil	10	EH
Metals 6010B Water Aluminum	Metals 6010B Soil Aluminum	10	EH
D2216 Moisture Soil		10	EH

Legend:  
 Numerical values for analytes equate to turn around time in days  
 H - Hold  
 EH - Extract & Hold

Geotracker EDF   
 Data Validation Package  Level IV

232668H  
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 71109

**CHAIN OF CUSTODY RECORD**

COC #: MW-HBM20090803\_00  
 Page: 3 of 3

Customer Information		Project Information		Boeing PM:							
Site:	SSFL	Client Name:	Boeing	Collector:	B. Mariasin						
Company:	MWH	Sampling Event:	ISRA Sampling - June 2009	Contact #:							
Report to:	Sarah Von Raesfeld	Project Number:	1881614.054521	Requested Analytes							
Address:	2121 N. California Blvd Walnut Creek CA 94598	Project Manager:	Alex Fisch	Metals 7471A Soil Mercury	H	EH	10	10			
		PM Phone #:	(925) 827-4827	Metals 7470A Water Mercury							
		Field Contact:	Brian Mariasin	Metals 6020 Zn Water							
		Field Contact #:	(323) 304-4888	Metals 6020 Water Lead							
		Lab Name:	GEL Laboratories, LLC	Metals 6020 Water Arsenic							
		Lab Contact:	Jackie Trudell	Metals 6020 Soil Zinc	H						
		Lab Address:	2040 Savage Road Charleston, SC 29407	Metals 6020 Soil Selenium							
		Lab Phone:	(843) 769-7388	Metals 6020 Soil Lead	H						
				Metals 6020 Soil Copper	H						
				Metals 6020 Soil Cadmium	H						
				Metals 6020 Soil Arsenic	H						
				Metals 6020 Se Water							
				Metals 6020 Cu Water							
				Metals 6020 Cd Water							
				Metals 6020 Ba Water							
				Metals 6020 Be Soil							
				Metals 6010B Water Aluminum							
				Metals 6010B Soil Aluminum							
				D2216 Moisture Soil	H						
Sample Name		Matrix		Date	Time	No. of Containers					
IL8802498002	Soil			8/2/2009	13:35	1					
EBON2217	Water			8/3/2009	13:30	10					

Instructions/TAT  
 Legend:  
 Numerical values for analytes  
 equate to turn around time in days  
 H - Hold  
 EH - Extract & Hold

1. Relinquished by:	Date:	6-3-09	2. Received by:	Date:	6/4/09	3. Relinquished by:	Date:		4. Received by:	Date:
	Time:	1515	R.M. Stelling	Time:	945		Time:		Company:	
Company:	MWH		Company:	Gel		Company:			Company:	
Comments:										

Geotracker EDF   
 Data Validation Package  Level IV

**SAMPLE RECEIPT & REVIEW FORM**

232668H

Client: SSFI SDG/ARCOC/Work Order: 2309527 of 7/1/09  
 Received By: RMS Date Received: 6/4/09

Suspected Hazard Information	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>40cpm</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"/>			ice bags    blue ice    dry ice    none    other (describe) <u>6.4°</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:
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:  
 Fx: 9457 3161 5453 @ 6°  
 " " 5394 @ 4°

PM (or PMA) review: Initials JT Date 6/4/09

232668H  
2308597 JT 7/1/09

**CHAIN OF CUSTODY RECORD**

COC #:

MWHBM20090602\_00

Page: 1 of 2

Customer Information			Project Information			Requested Analyses			Instructions/TAT	
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martasin	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 #:		Metals 7471A Soil Mercury				
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521	Requested Analyses			Metals 7470A Water Mercury			
Address:	2121 N. California Blvd	Project Manager:	Alex Fischl	Metals 6020 Water Lead			Metals 6020 Soil Lead			
	Suite 600	PM Phone #:	(925) 627-4627	Metals 6020 Soil Copper			Metals 6020 Soil Cadmium			
	Walnut Creek	Field Contact:	Brian Martasin	Metals 6020 Cu Water			Metals 6020 Cd Water			
	CA	Field Contact #:	(323) 304-4969	Dioxin by 1613B - Water			Dioxin by 1613B - Soil			
	94596	Lab Name:	GEL Laboratories, LLC	D2216 Moisture Soil						
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						
A1BS0056S001 ✓	Soil	6/2/2009	7:55	1	10	10				
A1BS0057S001 ✓	Soil	6/2/2009	8:05	1	10	10				
A1BS0058S001 ✓	Soil	6/2/2009	12:15	1	10	10				
A1BS0059S001 ✓	Soil	6/2/2009	12:27	1	10	10				
A1BS0060S001 ✓	Soil	6/2/2009	12:40	1	10	10				
A1BS0061S001 ✓	Soil	6/2/2009	12:50	1	10	10				
A1BS0062S001 ✓	Soil	6/2/2009	13:05	1	10	10				
EBCW2216 ✓	Water	6/2/2009	14:05	3	10	10	10	10		
ENBS0080S001 ✓	Soil	6/2/2009	10:52	1	10	10				
ENBS0081S001 ✓	Soil	6/2/2009	11:03	1	H	H				

1. Relinquished by:		2. Received by:		3. Relinquished by:		4. Received by:	
Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:
6-2-09	6-2-09	R.M. Stelling	6/3/09				
Time:	Time:	Company:	Time:	Time:	Time:	Company:	Time:
1455	1455	Chel	9:15				
Company:	Company:	Company:	Company:	Company:	Company:	Company:	Company:
MWH	MWH						
Comments:							
<input type="checkbox"/> Geotracker EDF <input checked="" type="checkbox"/> Data Validation Package <input type="checkbox"/> Level IV							

232668H  
2308597-07 7/1/09

**CHAIN OF CUSTODY RECORD**

COC #: MWHBM20090602\_00  
Page: 2 of 2

Customer Information		Project Information				Project Information	
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martasin	Boeing PM:	
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009	Contact #:			
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521	Requested Analyses			
Address:	2121 N. California Blvd	Project Manager:	Alex Fischl	Dioxin by 1613B - Soil	10	10	
	Suite 600	PM Phone #:	(925) 627-4627	Dioxin by 1613B - Water			
	Walnut Creek	Field Contact:	Brian Martasin	Metals 6020 Soil Lead	10	10	
	CA	Field Contact #:	(323) 304-4969	Metals 6020 Soil Copper	10	10	
	94598	Lab Name:	GEL Laboratories, LLC	Metals 6020 Soil Cadmium	10	10	
		Lab Contact:	Jackie Trudell	Metals 6020 Cu Water			
Email:	sarah.vonraesfeld@mwhglobal.c	Lab Address:	2040 Savage Road	Metals 7470A Water Mercury			
	sean.leffer@mwhglobal.com	Lab Phone:	Charleston, SC 29407	Metals 7471A Soil Mercury			
			(843) 769-7388	Metals 6020 Water Lead			
Sample Name		Matrix	Date	Time	No. of Containers		
ENBS0082S001	Soil		6/2/2009	9:47	1		
ENBS0083S001	Soil		6/2/2009	10:05	1		
ENBS0084S001	Soil		6/2/2009	10:17	1		
ENBS0085S001	Soil		6/2/2009	8:40	1		
ENBS0086S001	Soil		6/2/2009	8:50	1		
ENBS0087S001	Soil		6/2/2009	9:08	1		
ENBS0088S001	Soil		6/2/2009	9:20	1		

**Instructions/TAT**  
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.

**Comments**

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	4. Received by:	Date:
B. R.	6-2-09	L.M. Stelling	6/3/09				
Company:	Time:	Company:	Time:	Company:	Time:	Company:	Time:
MWH	1455	GEL	9:15				
Comments:	<input type="checkbox"/> Geotracker EDF <input checked="" type="checkbox"/> Data Validation Package Level IV						



SAMPLE RECEIPT & REVIEW FORM

232668H

Client: <u>SSPI</u>		SDG/ARCO/Work Order: <u>-220859 JI 7/1/09</u>	
Received By: <u>RMS</u>		Date Received: <u>6/3/09</u>	
<b>Suspected Hazard Information</b>		<b>Yes</b>	<b>No</b>
*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*:
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	<u>5000m</u>
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"/>			ice bags    blue ice    dry ice    none    other (describe) <u>3C</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:
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:

Fx: 9457 3161 5464

PM (or PMA) review: Initials JT Date 6/3/09

232668H  
 -2307617- JT  
 71109

COC #: MWHBM20090601\_00  
 Page: 1 of 2

**CHAIN OF CUSTODY RECORD**

Customer Information		Project Information		Project Information			
Site: SSFL	Client Name: Boeing	Collector: B. Mantash	Boeing PM:				
Company: MWH	Sampling Event: ISRA Sampling, June 2009	Contact #:					
Report to: Sarah Von Raesfeld	Project Number: 1891614.054521						
Address: 2121 N. California Blvd	Project Manager: Alex Fischl						
Suite 800	PM Phone #: (926) 627-4827						
Walnut Creek	Field Contact: Brian Mantash						
CA	Field Contact #: (323) 304-4969						
94598	Lab Name: GEL Laboratories, LLC						
Email: sarah.vonraesfeld@mwhglobal.c	Lab Contact: Cheryl Jones						
	Lab Address: 2040 Savage Road						
	Charleston, SC 29407						
	Lab Phone: (843) 769-7388						
Sample Name	Matrix	Date	Time	No. of Containers	Requested Analyses	Instructions/TAT	Comments
HZBS0123D001	Soil	6/1/2009	0:00	1	VOC by SW8260B - Water	Legend: Numerical values for analyses equates to turn around time in days	
HZBS0109S001	Soil	6/1/2009	8:00	1	TPH by SW8015BM - Water	H - Hold	
HZBS0109S001	Soil	6/1/2009	8:09	1	SVOCs by SW8270C SIM - Water	EH - Extract & Hold	
HZBS0114S001	Soil	6/1/2009	8:18	1	PCB by SW8082 - Water		
HZBS0116S001	Soil	6/1/2009	8:25	1	Metals 7470A Water Mercury		
HZBS0111S001	Soil	6/1/2009	8:28	1	Metals 6020 Zn Water		
HZBS0117S001	Soil	6/1/2009	8:41	1	Metals 6020 Water Lead		
HZBS0119S001	Soil	6/1/2009	8:55	1	Metals 6020 Water Arsenic		
HZBS0120S001	Soil	6/1/2009	9:03	1	Metals 6020 Soil Lead		
HZBS0121S001	Soil	6/1/2009	9:16	1	Metals 6020 Soil Copper		
					Metals 6020 Sa Water		
					Metals 6020 Cu Water		
					Metals 6020 Cd Water		
					Metals 6020 Be Water		
					Metals 6010B Water Aluminum		
					Dioxin by 1613B - Water		
					Dioxin by 1613B - Soil		
					D2216 Moisture Soil		

1. Relinquished by:	Date: 6-1-09	2. Received by:	Date: 6/2/09	3. Relinquished by:	Date:	4. Received by:	Date:
<i>[Signature]</i>	Time: 1615	<i>R.M. Stolley</i>	Time: 915				
Company: MWH	Company: GEL						
Comments:							

Geotracker EDF   
 Data Validation Package  Level IV

232668H  
2307617-IT  
7/1/09

MVWHBM20090601\_00  
Page: 2 of 2

COC #:

**CHAIN OF CUSTODY RECORD**

Customer Information		Project Information				Project Information	
Site:	SSFL	Client Name:	Boeing	Collector:	B. Martash	Boeing PM:	
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009	Contact #:			
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521				
Address:	2121 N. California Blvd Suite 600 Walnut Creek CA	Project Manager:	Alex Fischl (925) 627-4627 Brian Martash (323) 304-4989				
Email:	sarah.vonraesfeld@mwhglobal.com sean.jeffrey@mwhglobal.com	Lab Name:	GEL Laboratories, LLC				
		Lab Contact:	Cheryl Jones				
		Lab Address:	2040 Savage Road Charleston, SC 29407				
		Lab Phone:	(843) 786-7388				
Sample Name	Matrix	Date	Time	No. of Containers	Requested Analyses	Instructions/TAT	Comments
HZBS0118S001	Soil	6/1/2009	9:28	1	Dioxin by 1613B - Soil	10 10	
HZBS0112S001	Soil	6/1/2009	9:44	1	Dioxin by 1613B - Water	10 10	
HZBS0113S001	Soil	6/1/2009	9:57	1	Dioxin by 1613B - Soil	10 10	
HZBS0124S001	Soil	6/1/2009	10:56	1	Dioxin by 1613B - Water	10 10	
HZBS0123S001	Soil	6/1/2009	11:17	1	Dioxin by 1613B - Soil	10 10	
FBQW2231	Water	6/1/2009	14:05	10	Dioxin by 1613B - Water	10 10 10 10 10 10 10 10 10 10	
EBQW2215	Water	6/1/2009	14:25	3	Dioxin by 1613B - Water	10 10 10 10 10 10 10 10 10 10	
HZBS0115S001	Soil	6/1/2009	15:16	1	Dioxin by 1613B - Water	10 10 10 10 10 10 10 10 10 10	
					VOC by SW8260B - Water		
					TPH by SW8015BM - Water		
					SVOCs by SW8270C SIM - Water		
					PCB by SW8062 - Water		
					Metals 7470A Water Mercury		
					Metals 6020 Zn Water		
					Metals 6020 Water Lead		
					Metals 6020 Water Arsenic		
					Metals 6020 Soil Lead		
					Metals 6020 Soil Copper		
					Metals 6020 Se Water		
					Metals 6020 Cu Water		
					Metals 6020 Cd Water		
					Metals 6020 Be Water		
					Metals 6010B Water Aluminum		

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	4. Received by:	Date:
<i>[Signature]</i>	6-1-09	<i>R.M. Stollberg</i>	6/2/09				
Company:	Time:	Company:	Time:	Company:	Time:	Company:	Time:
MWH	16:15	Gre 1	16:45				
Comments:	<input type="checkbox"/> Geotrekker EDF <input checked="" type="checkbox"/> Data Validation Package <input type="checkbox"/> Level IV						



# SAMPLE RECEIPT & REVIEW FORM

Client: SSFI 23226684  
 Received By: RMS SDG/ARCO/Work Order: 230764 J 7/1/09  
 Date Received: 6/2/09  
 Suspected Hazard Information 

Yes	No
<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.  
 COC/Samples marked as radioactive? 

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

 Maximum Counts Observed\*: 2000m  
 Classified Radioactive II or III by RSO? 

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

  
 COC/Samples marked containing PCBs? 

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

  
 Shipped as a DOT Hazardous? 

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

 Hazard Class Shipped: \_\_\_\_\_ UN#: \_\_\_\_\_  
 Samples identified as Foreign Soil? 

Yes	No
<input 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 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"/>	ice bags    blue ice    dry ice    none    other (describe) <u>4, 6</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 type="checkbox"/>	Circle Applicable: seals broken    damaged container    leaking container    other (describe)
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:  
Ex: 9457 3161 5372  
      "      " 5383

PM (or PMA) review: Initials JT Date 6/2/09

## 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, 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)

**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)

Send Original Reports To:  
 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)	--	--	--



CHAIN OF CUSTODY RECORD

COC #:

MWHAR20090630\_00

23266A

Page: 1 of 1

**Customer Information**

Site: SSFL  
 Company: MWH  
 Report to: Sarah Von Raesfeld  
 Address: 2121 N. California Blvd  
 Suite 600  
 Walnut Creek  
 CA  
 94596  
 Email: sarah.vonraesfeld@mwhglobal.c  
 sean.leffler@mwhglobal.com

**Project Information**

Client Name: Boeing  
 Sampling Event: ISRA Sampling, June 2009  
 Project Number: 1891614.054521  
 Project Manager: Dixie Hambrick  
 PM Phone #: (626) 568-6348  
 Field Contact: Shelby Valenzuela  
 Field Contact #: (626) 255-0503  
 Lab Name: GEL Laboratories, LLC  
 Lab Contact: Jackie Trudell  
 Lab Address: 2040 Savage Road  
 Charleston, SC 29407  
 Lab Phone: (843) 769-7388

**Project Information**

Collector: Alison Ruotolo  
 Boeing PM:  
 Contact #:

Sample Name	Matrix	Date	Time	No. of Containers	Requested Analyses	Instructions/TAT	Comments
B1BS0091S001 ✓	Soil	6/30/2009	12:13	1	Dioxin by 1613B - Soil	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.	
B1BS0092D001 ✓	Soil	6/30/2009	10:33	1	D2216 Moisture Soil		
B1BS0092S001 ✓	Soil	6/30/2009	10:33	1			
B1BS0093S001 ✓	Soil	6/30/2009	11:23	1			
B1BS0094S001 ✓	Soil	6/30/2009	11:00	1			
B1BS0096S001 ✓	Soil	6/30/2009	11:49	1			

**1. Relinquished by:** Date: 6/30/09 Time: 1530

**2. Received by:** R.M. Stelling Date: 7/1/09 Time: 900 Company: GEL

**3. Relinquished by:** R.M. Stelling Date: 7/1/09 Time: 1600 Company: GEL

**4. Received by:** Date: 7/2/09 Time: 10:00 Company: S&S

Company: MWH

Comments:  Geotracker EDF  Data Validation Package

Seal Intact

232668



CHAIN OF CUSTODY RECORD

MWHSD20090630\_00

COC #:

Page: 1 of 1

GMA 888

Customer Information		Project Information	
Site:	SSFL	Client Name:	Boeing
Company:	MWH	Sampling Event:	ISRA Sampling, June 2009
Report to:	Sarah Von Raesfeld	Project Number:	1891614.054521
Address:	2121 N. California Blvd Suite 600 Walnut Creek CA 94596	Project Manager:	Dixie Hambrick (626) 568-6348 Shelby Valenzuela (626) 255-0503 GEL Laboratories, LLC
Email:	sarah.vonraesfeld@mwhglobal.c sean.leffler@mwhglobal.com	Lab Contact:	Jackie Trudell 2040 Savage Road Charleston, SC 29407 (843) 769-7388

Sample Name	Matrix	Date	Time	No. of Containers	Requested Analyses				Instructions/TAT
					Dioxin by 1613B - Soil	Dioxin by 1613B - Water	Metals 6020 Cu Water	Metals 6020 Water Lead	
HZBS0127S001 ✓	Soil	6/30/2009	9:20	1	10				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.
HZBS0128S001 ✓	Soil	6/30/2009	9:45	1	10				
HZBS0126S001 ✓	Soil	6/30/2009	9:50	1	H	H			
HZBS0125S001 ✓	Soil	6/30/2009	10:00	1	H	H			
FBQW2234 ✓	Water	6/30/2009	12:30	3		10	10		
EBQW2219 ✓	Water	6/30/2009	12:40	3			10		
									Comments

1. Relinquished by:	Date:	6/30/09	2. Received by:	Date:	6/1/09	3. Relinquished by:	Date:	7/1/09	4. Received by:	Date:	7/2/09
	Time:	1530	R.M. Stelling	Time:	900	R.M. Stelling	Time:	1800		Time:	10:00
Company:			Company:			Company:		Company:			
MWH			GEL			GEL		585-9			

Comments: HZBS0125S001 & HZBS0126S001 on Hold.  Geotracker EDF  Data Validation Package  Seal Intact

230761

CHAIN OF CUSTODY RECORD

MWHBM20090601\_00

COC #:

Page: 1 of 2

**Customer Information**

Site: SSFL  
 Company: MWH  
 Report to: Sarah Von Raestfeld  
 Address: 2121 N. California Blvd  
 Suite 600  
 Walnut Creek  
 CA  
 94596  
 Email: sarah.vorraestfeld@mwhglobal.c  
 sean.leffler@mwhglobal.com

**Project Information**

Client Name: Boeing  
 Sampling Event: ISRA Sampling, June 2009  
 Project Number: 1891814J54521  
 Project Manager: Alex Fischl  
 PM Phone #: (925) 627-4627  
 Field Contact: Brian Marfasi  
 Field Contact #: (323) 304-4969  
 Lab Name: GEL Laboratories, LLC  
 Lab Contact: Cheryl Jones  
 Lab Address: 2040 Savage Road  
 Charleston, SC 29407  
 Lab Phone: (843) 769-7388

**Project Information**

Collector: B. Marfasi  
 Contact #:

Sample Name	Matrix	Date	Time	No. of Containers	Requested Analytes	Instructions/TAT	Comments
HZBS0123001	Soil	6/1/2009	0:00	1	VOC by SW8260B - Water	Legend: Numerical values for analytes equal to turn around time in days H - Hold EH - Extract & Hold	
HZBS0110S001	Soil	6/1/2009	8:00	1	TPH by SW8015BM - Water		
HZBS0109S001	Soil	6/1/2009	6:00	1	SVOcs by SW8270C SIM - Water		
HZBS0114S001	Soil	6/1/2009	8:10	1	PCB by SW8082 - Water		
HZBS0116S001	Soil	6/1/2009	8:25	1	Metals 7470A Water Mercury		
HZBS0111S001	Soil	6/1/2009	8:28	1	Metals 8020 Zn Water		
HZBS0117S001	Soil	6/1/2009	8:41	1	Metals 8020 Water Lead		
HZBS0119S001	Soil	6/1/2009	8:55	1	Metals 8020 Water Arsenic		
HZBS0120S001	Soil	6/1/2009	9:03	1	Metals 8020 Soil Lead		
HZBS0121S001	Soil	6/1/2009	9:15	1	Metals 8020 Soil Copper		
					Metals 8020 Se Water		
					Metals 8020 Cu Water		
					Metals 8020 Cd Water		
					Metals 8020 Be Water		
					Metals 8010B Water Aluminum		
					Dioxin by 1613B - Water		
					Dioxin by 1613B - Soil		
					D2216 Moisture Soil		

**1. Relinquished by:** *[Signature]* Date: 6/1/09 Time: 16:15  
 Company: MWH

**2. Received by:** *[Signature]* Date: 6/2/09 Time: 9:15  
 Company: GEL

**3. Relinquished by:** *[Signature]* Date: 6/2/09 Time: 17:00  
 Company: ETEL

**4. Received by:** *[Signature]* Date: 6/3/09 Time: 10:05  
 Company: SGS

Comments:  Geotracker EDF  Data Validation Package  Level IV

## Lockamy, Lori Inl (Wilmington)

---

**From:** Jacqueline Trudell [jac01439@gel.com]  
**Sent:** Monday, July 06, 2009 8:01 AM  
**To:** Lockamy, Lori Inl (Wilmington)  
**Subject:** Dioxin Add-on

Hi Lori!  
Hope you had a wonderful holiday weekend!

Please add sample HZBS0109S001 (sample received on HOLD at SGS) to the SDG of samples received on Thursday of last week.

Thanks!  
Jackie

G341-583-3 → G341-588-13

--  
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  
Web: www.gel.com

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Cust Proj ID: SSFL 232668

Due Date: 2009-07-15 17:00:00

Client Name: General Engineering Labs PO:

Login Date: 2009-07-02 11:47:26

# G341-588

Sample ID	Cust Sample ID	PRI	Date Collected	Date Received	Date Due	Matrix	LOC	Report	Analysis	Status
G341-588-1	A B1BS0091S001	RUSH	2009-06-30 12:13:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	PR::NEED
G341-588-2	A B1BS0092D001	RUSH	2009-06-30 10:33:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	PR::NEED
G341-588-3	A B1BS0092S001	RUSH	2009-06-30 10:33:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	PR::NEED
G341-588-4	A B1BS0093S001	RUSH	2009-06-30 11:23:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	PR::NEED
G341-588-5	A B1BS0094S001	RUSH	2009-06-30 11:00:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	LG::HOLD
G341-588-6	A B1BS0096S001	RUSH	2009-06-30 11:49:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	LG::HOLD
G341-588-7	A HZBS0127S001	RUSH	2009-06-30 09:20:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	PR::NEED
G341-588-8	A HZBS0128S001	RUSH	2009-06-30 09:45:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	PR::NEED
G341-588-9	A HZBS0126S001	RUSH	2009-06-30 09:50:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	LG::HOLD
G341-588-10	A HZBS0125S001	RUSH	2009-06-30 10:00:00	2009-07-02	2009-07-15	Soil	W2	Full	1613	LG::HOLD
G341-588-11	A FBQW2234	RUSH	2009-06-30 12:30:00	2009-07-02	2009-07-15	Water	W2	Full	1613	PR::NEED
G341-588-12	A EBQW2219	RUSH	2009-06-30 12:40:00	2009-07-02	2009-07-15	Water	W2	Full	1613	PR::NEED
G341-588-13	A HZBS0109S001	RUSH	2009-06-01 08:09:00	2009-06-03	2009-07-15	Soil	W2	Full	1613	PR::NEED

# Sample Receipt Checklist (SRC)

SGS Environmental Services Inc.

Client: General Engineering Labs

Lab Proj. ID: G341-588

Client Proj. ID: SSFL 232668

1.  Shipped  
 Hand Delivered  
Notes: \_\_\_\_\_
2.  Proper, full, and complete documentation  
(unique sample identification on durable label with indelible ink,  
location of collection, date/time of collection, collector's name,  
preservation type, sample type (method/matrix))  
 Acceptable documentation (but, incomplete)  
 Unacceptable documentation  
Notes: \_\_\_\_\_
3.  Custody Tape on Container  
 No Custody Tape  
Notes: \_\_\_\_\_
4.  Samples Intact\*  
(are in appropriate container, are not damaged, and do not show signs  
of contamination)  
 Samples Broken / Leaking  
 VOA Vials Checked for Air Bubbles  
Notes: \_\_\_\_\_
5.  Chilled on Receipt\*      Actual Temp.(s) in °C: 5.9  
 Ambient on Receipt  
 Walk-in on Ice; Coming down to temp.  
 Received out of temperature protocol  
Notes: \_\_\_\_\_
6.  Sufficient Sample Submitted  
 Insufficient Sample Submitted  
Notes: \_\_\_\_\_
7.  Samples Preserved Correctly\*  
(see preservative checklist where applicable)  
 Improper Preservative(s)  
 None recommended (N/A)  
Notes: \_\_\_\_\_
8.  Received Within Holding Time  
 Not Received Within Holding Time  
 N/A  
Notes: \_\_\_\_\_
9.  No Discrepancies Noted  
 Discrepancies Noted  
Notes: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\* = Rejection of sample is required when not marked; Contact client services immediately for a resolution.

Inspected and Logged in by: WLL  
Date / Time: Wed-7/15/09 16:42

DC27.091503.3

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# **Case Narrative**

**Case Narrative  
for  
Boeing - SSFL (MWH)  
Work Order: 232668  
SDG: 232668H**

**July 16, 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 July 01, 2009, June 02, 2009, June 03, 2009 and June 04, 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>
232668001	B1BS0091S001
232668002	B1BS0092D001
232668003	B1BS0092S001
232668004	B1BS0093S001
232668005	B1BS0094S001
232668006	B1BS0096S001
232668007	HZBS0127S001
232668008	HZBS0128S001
232668009	HZBS0126S001
232668010	HZBS0125S001
232668011	FBQW2234
232668012	EBQW2219
232668013	ILBS0251S002
232668014	HZBS0109S001
232668015	ENBS0082S001
232668016	ENBS0083S001
232668017	ENBS0084S001
232668018	B1BS0080S002
232668019	ILBS0249S002
232668020	ILBS0250S001
232668021	ILBS0251S001
232668022	ILBS0253S001

**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.

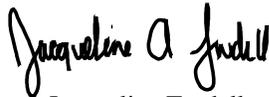
**Case Narrative**

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: FID Flame Ionization Detector, GC Semivolatile PCB, GC/MS Semivolatile, Metals, Percent Moisture and Dioxins (SGS Laboratories).

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.



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 16 July 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

# **Subcontract Data**

## **Dioxins**



## Laboratory Results

Ms. Jacqueline Trudell  
General Engineering Labs  
2040 Savage Rd.  
Charleston SC 29407

Phone: 843-556-8171  
Fax:

Dear Ms. Trudell:

Enclosed is a full data package containing the final results for samples received by SGS Environmental Services, Inc. on July 2, 2009 under your project name "SSFL 232668". The samples were analyzed by Method 1613 following SGS's Standard Operating Procedures and are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards.

Number of Samples Received:	12
Your Project Reference:	SSFL 232668
PAL Project Number:	G341-588

We appreciate your business and look forward to working with you again. Please contact me at 910-350-1903 if you have questions or need additional technical support.

Sincerely,

  
Lori Lockamy  
Project Manager

15 July 2009  
Date

DC138.033007.7





## Table of Contents

### **Section 1: Cover Letter/Case Narrative**

Contains the Table of Contents, a project narrative, the client and SGS project identifiers, the number and type of samples, the methodology used to process the samples, and a summary table of sample results. A listing of current certifications by state, a table of abbreviations and qualifiers and the Toxic Equivalent Factors (TEF) are also supplied.

### **Section 2: Project Information**

Contains the chain-of-custody(s), internal chain-of-custody(s) if applicable, sample login summary, sample receipt checklist, and any other project/client specific information.

### **Section 3: Sample Analytical Results**

Contains results for client samples. Sample results include two pages of summarized analytical data and the associated raw data. The raw data includes a quantitation report from the instrumentation used that lists, ion areas, ratios, retention times, concentrations, and signal-to-noise ratios. It also has the selected ion current profiles (SICPs) for all homolog groups and any manual integrations.

### **Section 4: Quality Control Analytical Results**

Contains results for each analytical workgroup associated with the submitted samples. A workgroup consists of the Lab Method Blank (LMB) and the Ongoing Precision and Recovery sample (OPR). All sample preparation data, including dry weight determinations, extraction logs, clean-up logs and observation notes are also documented. Any other supporting QC data will be documented here upon client request.

### **Section 5: Initial Calibration**

Contains a table summarizing calibration data such as relative response factors, concentrations, and percent relative standard deviation. This section also contains related daily instrument QC information: GC performance data, mass resolution check, windows defining mix, and SICPs for all homolog groups and any manual integrations as well as the injection prep and instrument run logs.

### **Section 6: Continuing Calibration Data**

Contains all daily instrument quality control information. This includes mass resolution checks, a table summarizing the window defining peaks, SICPs for the first and last eluters for each homolog group, SICPs documenting GC performance, a summary quantitation report showing RRFs for the Ccal and Ical, and SICPs for all homolog groups and any manual integrations, injection prep and instrumentation runlogs.



## List of Qualifiers: Dioxin's

B Analyte was detected in the Lab Method Blank at a level above the Reporting Limit.

EDL "Estimated Detection Limit"

EMPC "Estimated Maximum Possible Concentration"

RL Report Limit

CL Control Limit

U Undetected

ppt Parts-per-trillion (pg/g; ng/L)

V Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit.

# Outside quality control limits

\* Indicates that the ion-ratio fails high or low; analyte reported as an EMPC

An average uncertainty of 30% can be routinely achieved as concluded from the evaluation of HRGC-HRMS standard operating procedures. The following flags warn the data user of situations where the uncertainty may be greater than stated.

A Amount detected is less than the Lower Method Calibration Limit.

J Amount detected is between the Method Detection Limit and the Lower Calibration Limit.

O The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high.

E Amount detected is greater than the Upper Calibration Limit.

S The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s).

Q Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s).

I Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s).

DPE Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s).

DC250.081908.1



# DATA VALIDATION REPORT

Boeing SSFL RFI ISRA

SAMPLE DELIVERY GROUP: 232668H

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: 232668H  
 Project Manager: Dixie Hambrick  
 Matrix: water/soil  
 QC Level: V  
 No. of Samples: 18  
 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>
B1BS0080S002	232668018	N/A	Soil	6/3/2009 7:50:00 AM	8015B
B1BS0091S001	232668001	G341-588-1B	Soil	6/30/2009 12:13:00 PM	1613B
B1BS0092D001	232668002	G341-588-2B	Soil	6/30/2009 10:33:00 AM	1613B
B1BS0092S001	232668003	G341-588-3B	Soil	6/30/2009 10:33:00 AM	1613B
B1BS0093S001	232668004	G341-588-4B	Soil	6/30/2009 11:23:00 AM	1613B
EBQW2219	232668012	G341-588-12B	Water	6/30/2009 12:40:00 PM	1613B
ENBS0082S001	232668015	N/A	Soil	6/2/2009 9:47:00 AM	8270C
ENBS0083S001	232668016	N/A	Soil	6/2/2009 10:05:00 AM	8270C
ENBS0084S001	232668017	N/A	Soil	6/2/2009 10:17:00 AM	8270C
FBQW2234	232668011	G341-588-11B	Water	6/30/2009 12:30:00 PM	1613B, 6020
HZBS0109S001	232668014	G341-588-13B	Soil	6/1/2009 8:09:00 AM	1613B
HZBS0127S001	232668007	G341-588-7B	Soil	6/30/2009 9:20:00 AM	1613B
HZBS0128S001	232668008	G341-588-8B	Soil	6/30/2009 9:45:00 AM	1613B
ILBS0249S002	232668019	N/A	Soil	6/3/2009 1:05:00 PM	8082
ILBS0250S001	232668020	N/A	Soil	6/3/2009 12:45:00 PM	8082
ILBS0251S001	232668021	N/A	Soil	6/3/2009 12:20:00 PM	8082
ILBS0251S002	232668013	N/A	Soil	6/3/2009 12:30:00 PM	7471A, 6020
ILBS0253S001	232668022	N/A	Soil	6/3/2009 10:55:00 AM	8082

## 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  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . 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 upon receipt at GEL. No custody seals were present upon receipt at SGS. 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.	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.

**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: July 23, 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 (10/99)*.

- 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: OCDD was detected in the soil method blank at 0.666 pg/g; however, all sample detects were above the reporting limit and exceeded 5x the method blank concentration. 1,2,3,7,8-PeCDF and Total PeCDF were detected in the aqueous method blank at 0.000820 ng/L but were not detected in the aqueous samples. Method blanks had no other target compound detects above the EDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613 and RPDs were within the 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: FBQW2234 was identified as the field blank and EBQW2219 was identified as the equipment rinsate associated with all samples except HZBS0109S001. FBQW2231 (230761) was the field blank and EBQW2215 (230761) was the equipment rinsate associated with HZBS0109S001. There were no detects above the EDL in any of the field QC samples.
  - Field Duplicates: B1BS0092S001 and B1BS0092D001 were identified as field duplicate samples. All detects were in common and all RPDs were less than 100%.
- 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. Confirmation analysis was not performed by the laboratory for 2,3,7,8-TCDF detects reported between the EDL and the adjusted reporting limit; therefore, the results for 2,3,7,8-TCDF were qualified as estimated, "J," in all of the samples of this SDG. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- **Compound Quantification and Reported Detection Limits:** Review is not applicable at a Level V validation. The laboratory calculated and reported compound-specific detection limits. Quantitative interference, as denoted by a laboratory "Q" code, was present in several results in the samples of this SDG; therefore, any result with a laboratory "Q," code was qualified as estimated, "J," for detects and, "UJ," for nondetects. EMPCs (estimated maximum possible concentration) were identified in the samples of this SDG. Any EMPC was qualified as estimated, "UJ," in the samples of this SDG.

OCDD in B1BS0092D001 and B1BS0092S001 was analyzed at a 5× dilution but these two analytes and OCDD in HZBS0127S001 were reported above the linear range of the calibration and were qualified as estimated, "J". Any detect below the laboratory lower calibration level was qualified as estimated, "J." The laboratory calculated and reported compound-specific detection limits. Nondetects are valid to the estimated detection limit (EDL).

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

Reviewed By: P. Meeks

Date Reviewed: July 23, 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 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- **Holding Times:** Analytical holding times, six months for 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:** Mercury was reported in the soil method blank at -0.0051 mg/kg; therefore, nondetected mercury in the sample was qualified as estimated, "UJ." There were no other applicable detects in the method blanks or CCBs.

- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries and aqueous RPDs were within laboratory-established QC limits.
- Laboratory Duplicates: Laboratory duplicate analyses were performed on ILBS0251S002 for mercury only. The RPD was within the laboratory-established control limit.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on ILBS0251S002 for mercury only. Recoveries and the RPD were within laboratory-established QC limits.
- Serial Dilution: Serial dilution analyses were performed on FBQW2234, and on ILBS0251S002 for mercury only. 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 ICP-MS analyte was analyzed at 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: FBQW2231 (230761) was the field blank and EBQW2219 was the equipment blank associated with the soil sample in this SDG. There were no applicable detects in the field QC samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

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

Reviewed By: P. Meeks

Date Reviewed: July 23, 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: The soil samples were extracted beyond the 14-days holding time; therefore all results were qualified as estimated, “J,” for detects and, “UJ,” for nondetects. All samples were extracted 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 10.1 µg/kg; therefore, this target analyte was qualified as nondetected, “U,” in all samples, either at the RL if detected below the RL or at the level of contamination if detected above. The method blanks had no other 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 performed on ENBS0083S001. Recoveries and 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: FBQW2231 (230761) was the field blank and EBQW2216 (230859) was the equipment rinsate associated with the samples in this SDG. There were no detects above the MDL in the field blank and the equipment rinsate was not analyzed for PAH compounds.
  - 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 low-level Method 8270C.
- 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.

## D. EPA METHOD 8082—PCBs

Reviewed By: P. Meeks

Date Reviewed: July 23, 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: The soil samples were extracted beyond the 14-days holding time; therefore, all results (all nondetects) were qualified as estimated, "UJ." All samples were extracted 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 performed on ILBS0253S001. All recoveries and 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: FBQW2231 (230761) was the field blank and EBQW2217 (230952) was the equipment rinsate associated with the samples in this SDG. There were no detects above the MDL in the field QC samples.
  - 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. ILBS0249S001 and ILBS0253S001 were analyzed at 5× dilutions due to oily matrices. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

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

Reviewed By: P. Meeks

Date Reviewed: July 23, 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 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 soil 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: EFH (C21-C30) was detected at 1.12 mg/kg; however, the sample detect exceeded 5× the method blank concentration. Method blanks had no other target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: The 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 performed on the sample in this SDG. The recoveries and RPD 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: FBQW2231 (230761) was the field blank and EBQW2217 (230952) was the equipment rinsate associated with the samples in this SDG. There were no detects above the MDL in the field QC samples.
  - 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. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

# Validated Sample Result Forms: 232668H

*Analysis Method 1613B*

Sample Name	B1BS0091S001	Matrix Type:	Soil	Result Type:	Primary Result			
Lab Sample Name:	G341-588-1B	Sample Date:	6/30/2009 12:13:00 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	155	4.29	0.474	PG/G			
1,2,3,4,6,7,8-HpCDF	67562394	10.5	4.29	0.188	PG/G			
1,2,3,4,7,8,9-HpCDF	55673897	0.429	4.29	0.314	PG/G	A	J	
1,2,3,4,7,8-HxCDD	39227286	0.631	4.29	0.209	PG/G	A	J	
1,2,3,4,7,8-HxCDF	70648269	0.794	4.29	0.136	PG/G	A	J	
1,2,3,6,7,8-HxCDD	57653857	4.77	4.29	0.213	PG/G			
1,2,3,6,7,8-HxCDF	57117449	0.437	4.29	0.136	PG/G	A	J	
1,2,3,7,8,9-HxCDD	19408743	1.89	4.29	0.213	PG/G	A	J	
1,2,3,7,8,9-HxCDF	72918219	0.477	4.29	0.179	PG/G	A	J	
1,2,3,7,8-PeCDD	40321764	0.211	4.29	0.211	PG/G	EMPC	UJ	*III
1,2,3,7,8-PeCDF	57117416	0.295	4.29	0.0761	PG/G	A	J	
2,3,4,6,7,8-HxCDF	60851345	0.631	4.29	0.151	PG/G	A	J	
2,3,4,7,8-PeCDF	57117314	0.434	4.29	0.0825	PG/G	A	J	
2,3,7,8-TCDD	1746016	0.224	0.857	0.224	PG/G	U	U	
2,3,7,8-TCDF	51207319	0.374	0.857	0.161	PG/G	A Q	J	*III
OCDD	3268879	3080	8.57	0.398	PG/G			
OCDF	39001020	13.4	8.57	0.331	PG/G			
Total HpCDDs	37871004	790	4.29	0.474	PG/G			
Total HpCDFs	38998753	31.7	4.29	0.243	PG/G			
Total HxCDDs	34465468	34.4	4.29	0.212	PG/G			
Total HxCDFs	55684941	21.3	4.29	0.149	PG/G			
Total PeCDDs	36088229	0.257	4.29	0.257	PG/G	QU	UJ	*III
Total PeCDFs	30402154	3.47	4.29	0.0794	PG/G	A Q	J	*III
Total TCDDs	41903575	0.224	0.857	0.224	PG/G	QU	UJ	*III
Total TCDFs	30402143	0.952	0.857	0.161	PG/G			

*Analysis Method 1613B*

**Sample Name:** B1BS0092D001      **Matrix Type:** Soil      **Result Type:** Primary Result  
**Lab Sample Name:** G341-588-2B      **Sample Date:** 6/30/2009 10:33:00 AM      **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	1440	4.28	0.195	PG/G			
1,2,3,4,6,7,8-HpCDF	67562394	99.9	4.28	0.248	PG/G			
1,2,3,4,7,8,9-HpCDF	55673897	3.26	4.28	0.356	PG/G	A	J	
1,2,3,4,7,8-HxCDD	39227286	4.26	4.28	0.302	PG/G	A	J	
1,2,3,4,7,8-HxCDF	70648269	6.51	4.28	0.277	PG/G			
1,2,3,6,7,8-HxCDD	57653857	41.4	4.28	0.312	PG/G			
1,2,3,6,7,8-HxCDF	57117449	2.57	4.28	0.274	PG/G	A	J	
1,2,3,7,8,9-HxCDD	19408743	13	4.28	0.309	PG/G			
1,2,3,7,8,9-HxCDF	72918219	4.09	4.28	0.325	PG/G	A	J	
1,2,3,7,8-PeCDD	40321764	1.86	4.28	0.216	PG/G	A	J	
1,2,3,7,8-PeCDF	57117416	2.04	4.28	0.189	PG/G	A	J	
2,3,4,6,7,8-HxCDF	60851345	4.84	4.28	0.272	PG/G			
2,3,4,7,8-PeCDF	57117314	3.19	4.28	0.195	PG/G	A	J	
2,3,7,8-TCDD	1746016	0.269	0.856	0.269	PG/G	U	U	
2,3,7,8-TCDF	51207319	0.811	0.856	0.138	PG/G	A	J	*III
OCDD	3268879	30300	42.8	1.74	PG/G	E	J	*III
OCDF	39001020	113	8.56	0.238	PG/G			
Total HpCDDs	37871004	8340	4.28	0.195	PG/G			
Total HpCDFs	38998753	334	4.28	0.296	PG/G			
Total HxCDDs	34465468	366	4.28	0.308	PG/G			
Total HxCDFs	55684941	236	4.28	0.286	PG/G			
Total PeCDDs	36088229	17.4	4.28	0.216	PG/G			
Total PeCDFs	30402154	30.2	4.28	0.192	PG/G			
Total TCDDs	41903575	2.09	0.856	0.269	PG/G			
Total TCDFs	30402143	3.8	0.856	0.189	PG/G			

*Analysis Method 1613B*

**Sample Name:** B1BS0092S001      **Matrix Type:** Soil      **Result Type:** Primary Result  
**Lab Sample Name:** G341-588-3B      **Sample Date:** 6/30/2009 10:33:00 AM      **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	988	4.16	1.24	PG/G			
1,2,3,4,6,7,8-HpCDF	67562394	66.9	4.16	0.112	PG/G			
1,2,3,4,7,8,9-HpCDF	55673897	2.21	4.16	0.158	PG/G	A	J	
1,2,3,4,7,8-HxCDD	39227286	3.54	4.16	0.277	PG/G	A	J	
1,2,3,4,7,8-HxCDF	70648269	4.44	4.16	0.388	PG/G			
1,2,3,6,7,8-HxCDD	57653857	28.6	4.16	0.295	PG/G			
1,2,3,6,7,8-HxCDF	57117449	1.84	4.16	0.396	PG/G	A	J	
1,2,3,7,8,9-HxCDD	19408743	9.58	4.16	0.289	PG/G			
1,2,3,7,8,9-HxCDF	72918219	2.75	4.16	0.444	PG/G	A	J	
1,2,3,7,8-PeCDD	40321764	1.62	4.16	0.132	PG/G	A	J	
1,2,3,7,8-PeCDF	57117416	1.36	4.16	0.0883	PG/G	A	J	
2,3,4,6,7,8-HxCDF	60851345	3.36	4.16	0.4	PG/G	A	J	
2,3,4,7,8-PeCDF	57117314	2.18	4.16	0.0969	PG/G	A	J	
2,3,7,8-TCDD	1746016	0.34	0.833	0.34	PG/G	EMPC	UJ	*III
2,3,7,8-TCDF	51207319	0.609	0.833	0.147	PG/G	A	J	*III
OCDD	3268879	20400	41.6	1.56	PG/G	E	J	*III
OCDF	39001020	78.8	8.33	0.211	PG/G			
Total HpCDDs	37871004	6010	4.16	1.24	PG/G			
Total HpCDFs	38998753	220	4.16	0.132	PG/G			
Total HxCDDs	34465468	271	4.16	0.287	PG/G			
Total HxCDFs	55684941	154	4.16	0.406	PG/G			
Total PeCDDs	36088229	19	4.16	0.132	PG/G			
Total PeCDFs	30402154	23.1	4.16	0.0926	PG/G			
Total TCDDs	41903575	3.08	0.833	0.236	PG/G			
Total TCDFs	30402143	3.73	0.833	0.189	PG/G			

*Analysis Method 1613B*

**Sample Name:** B1BS0093S001      **Matrix Type:** Soil      **Result Type:** Primary Result  
**Lab Sample Name:** G341-588-4B      **Sample Date:** 6/30/2009 11:23:00 AM      **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	7.05	4.23	0.324	PG/G			
1,2,3,4,6,7,8-HpCDF	67562394	0.935	4.23	0.17	PG/G	A	J	
1,2,3,4,7,8,9-HpCDF	55673897	0.256	4.23	0.256	PG/G	U	U	
1,2,3,4,7,8-HxCDD	39227286	0.193	4.23	0.193	PG/G	U	U	
1,2,3,4,7,8-HxCDF	70648269	0.157	4.23	0.157	PG/G	EMPC	UJ	*III
1,2,3,6,7,8-HxCDD	57653857	0.837	4.23	0.198	PG/G	A	J	
1,2,3,6,7,8-HxCDF	57117449	0.19	4.23	0.129	PG/G	A	J	
1,2,3,7,8,9-HxCDD	19408743	0.898	4.23	0.197	PG/G	A	J	
1,2,3,7,8,9-HxCDF	72918219	0.218	4.23	0.218	PG/G	EMPC	UJ	*III
1,2,3,7,8-PeCDD	40321764	0.157	4.23	0.157	PG/G	U	U	
1,2,3,7,8-PeCDF	57117416	0.122	4.23	0.122	PG/G	EMPC	UJ	*III
2,3,4,6,7,8-HxCDF	60851345	0.161	4.23	0.134	PG/G	A	J	
2,3,4,7,8-PeCDF	57117314	0.256	4.23	0.107	PG/G	A	J	
2,3,7,8-TCDD	1746016	0.307	0.847	0.307	PG/G	U	U	
2,3,7,8-TCDF	51207319	0.335	0.847	0.335	PG/G	EMPC	UJ	*III
OCDD	3268879	97.3	8.47	0.504	PG/G			
OCDF	39001020	2.15	8.47	0.421	PG/G	A	J	
Total HpCDDs	37871004	31.7	4.23	0.324	PG/G			
Total HpCDFs	38998753	2.4	4.23	0.208	PG/G	A	J	
Total HxCDDs	34465468	3.55	4.23	0.196	PG/G	A	J	
Total HxCDFs	55684941	2	4.23	0.137	PG/G	A	J	
Total PeCDDs	36088229	0.157	4.23	0.157	PG/G	U	U	
Total PeCDFs	30402154	1.88	4.23	0.112	PG/G	A	J	
Total TCDDs	41903575	0.307	0.847	0.307	PG/G	U	U	
Total TCDFs	30402143	0.721	0.847	0.224	PG/G	A	J	

*Analysis Method 1613B*

**Sample Name** EBQW2219 **Matrix Type:** Water **Result Type:** Primary Result  
**Lab Sample Name:** G341-588-12B **Sample Date:** 6/30/2009 12:40:00 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	0.00299	0.0477	0.00299	NG/L	U	U	
1,2,3,4,6,7,8-HpCDF	67562394	0.00164	0.0477	0.00164	NG/L	U	U	
1,2,3,4,7,8,9-HpCDF	55673897	0.00254	0.0477	0.00254	NG/L	U	U	
1,2,3,4,7,8-HxCDD	39227286	0.00164	0.0477	0.00164	NG/L	U	U	
1,2,3,4,7,8-HxCDF	70648269	0.00105	0.0477	0.00105	NG/L	U	U	
1,2,3,6,7,8-HxCDD	57653857	0.00163	0.0477	0.00163	NG/L	U	U	
1,2,3,6,7,8-HxCDF	57117449	0.00108	0.0477	0.00108	NG/L	U	U	
1,2,3,7,8,9-HxCDD	19408743	0.00165	0.0477	0.00165	NG/L	U	U	
1,2,3,7,8,9-HxCDF	72918219	0.00155	0.0477	0.00155	NG/L	U	U	
1,2,3,7,8-PeCDD	40321764	0.00119	0.0477	0.00119	NG/L	U	U	
1,2,3,7,8-PeCDF	57117416	0.000851	0.0477	0.000851	NG/L	U	U	
2,3,4,6,7,8-HxCDF	60851345	0.0011	0.0477	0.0011	NG/L	U	U	
2,3,4,7,8-PeCDF	57117314	0.000781	0.0477	0.000781	NG/L	U	U	
2,3,7,8-TCDD	1746016	0.0023	0.00954	0.0023	NG/L	U	U	
2,3,7,8-TCDF	51207319	0.00135	0.00954	0.00135	NG/L	U	U	
OCDD	3268879	0.00528	0.0954	0.00528	NG/L	U	U	
OCDF	39001020	0.00502	0.0954	0.00502	NG/L	U	U	
Total HpCDDs	37871004	0.00299	0.0477	0.00299	NG/L	U	U	
Total HpCDFs	38998753	0.00203	0.0477	0.00203	NG/L	U	U	
Total HxCDDs	34465468	0.00164	0.0477	0.00164	NG/L	U	U	
Total HxCDFs	55684941	0.00118	0.0477	0.00118	NG/L	U	U	
Total PeCDDs	36088229	0.00119	0.0477	0.00119	NG/L	U	U	
Total PeCDFs	30402154	0.0007	0.0477	0.0007	NG/L	U	U	
Total TCDDs	41903575	0.0023	0.00954	0.0023	NG/L	U	U	
Total TCDFs	30402143	0.00135	0.00954	0.00135	NG/L	U	U	

*Analysis Method 1613B*

Sample Name	FBQW2234	Matrix Type:	Water	Result Type:	Primary Result			
Lab Sample Name:	G341-588-11B	Sample Date:	6/30/2009 12:30:00 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	0.00284	0.0505	0.00284	NG/L	U	U	
1,2,3,4,6,7,8-HpCDF	67562394	0.00152	0.0505	0.00152	NG/L	U	U	
1,2,3,4,7,8,9-HpCDF	55673897	0.00252	0.0505	0.00252	NG/L	U	U	
1,2,3,4,7,8-HxCDD	39227286	0.00125	0.0505	0.00125	NG/L	U	U	
1,2,3,4,7,8-HxCDF	70648269	0.000994	0.0505	0.000994	NG/L	U	U	
1,2,3,6,7,8-HxCDD	57653857	0.00126	0.0505	0.00126	NG/L	U	U	
1,2,3,6,7,8-HxCDF	57117449	0.000994	0.0505	0.000994	NG/L	U	U	
1,2,3,7,8,9-HxCDD	19408743	0.00127	0.0505	0.00127	NG/L	U	U	
1,2,3,7,8,9-HxCDF	72918219	0.00139	0.0505	0.00139	NG/L	U	U	
1,2,3,7,8-PeCDD	40321764	0.00121	0.0505	0.00121	NG/L	U	U	
1,2,3,7,8-PeCDF	57117416	0.000794	0.0505	0.000794	NG/L	U	U	
2,3,4,6,7,8-HxCDF	60851345	0.00104	0.0505	0.00104	NG/L	U	U	
2,3,4,7,8-PeCDF	57117314	0.000768	0.0505	0.000768	NG/L	U	U	
2,3,7,8-TCDD	1746016	0.00198	0.0101	0.00198	NG/L	U	U	
2,3,7,8-TCDF	51207319	0.00147	0.0101	0.00147	NG/L	U	U	
OCDD	3268879	0.00481	0.101	0.00481	NG/L	U	U	
OCDF	39001020	0.00425	0.101	0.00425	NG/L	U	U	
Total HpCDDs	37871004	0.00284	0.0505	0.00284	NG/L	U	U	
Total HpCDFs	38998753	0.00195	0.0505	0.00195	NG/L	U	U	
Total HxCDDs	34465468	0.00126	0.0505	0.00126	NG/L	U	U	
Total HxCDFs	55684941	0.0011	0.0505	0.0011	NG/L	U	U	
Total PeCDDs	36088229	0.00121	0.0505	0.00121	NG/L	U	U	
Total PeCDFs	30402154	0.000628	0.0505	0.000628	NG/L	U	U	
Total TCDDs	41903575	0.00198	0.0101	0.00198	NG/L	U	U	
Total TCDFs	30402143	0.00147	0.0101	0.00147	NG/L	U	U	

*Analysis Method 1613B*

**Sample Name** HZBS0109S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** G341-588-13B **Sample Date:** 6/1/2009 8:09:00 AM **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	21.9	4.36	0.252	PG/G			
1,2,3,4,6,7,8-HpCDF	67562394	2.05	4.36	0.126	PG/G	A	J	
1,2,3,4,7,8,9-HpCDF	55673897	0.193	4.36	0.193	PG/G	U	U	
1,2,3,4,7,8-HxCDD	39227286	0.417	4.36	0.163	PG/G	A	J	
1,2,3,4,7,8-HxCDF	70648269	0.187	4.36	0.129	PG/G	A	J	
1,2,3,6,7,8-HxCDD	57653857	1.17	4.36	0.167	PG/G	A	J	
1,2,3,6,7,8-HxCDF	57117449	0.148	4.36	0.125	PG/G	A	J	
1,2,3,7,8,9-HxCDD	19408743	0.921	4.36	0.166	PG/G	A	J	
1,2,3,7,8,9-HxCDF	72918219	0.213	4.36	0.149	PG/G	A	J	
1,2,3,7,8-PeCDD	40321764	0.279	4.36	0.0956	PG/G	A	J	
1,2,3,7,8-PeCDF	57117416	0.0949	4.36	0.0949	PG/G	U	U	
2,3,4,6,7,8-HxCDF	60851345	0.152	4.36	0.129	PG/G	A	J	
2,3,4,7,8-PeCDF	57117314	0.145	4.36	0.145	PG/G	EMPC	UJ	*III
2,3,7,8-TCDD	1746016	0.219	0.872	0.219	PG/G	U	U	
2,3,7,8-TCDF	51207319	0.272	0.872	0.146	PG/G	A	J	*III
OCDD	3268879	345	8.72	0.353	PG/G			
OCDF	39001020	5.47	8.72	0.315	PG/G	A	J	
Total HpCDDs	37871004	83.2	4.36	0.252	PG/G			
Total HpCDFs	38998753	5.37	4.36	0.156	PG/G			
Total HxCDDs	34465468	7.13	4.36	0.165	PG/G			
Total HxCDFs	55684941	3.24	4.36	0.132	PG/G	A	J	
Total PeCDDs	36088229	0.583	4.36	0.201	PG/G	A	J	
Total PeCDFs	30402154	0.616	4.36	0.1	PG/G	A	J	
Total TCDDs	41903575	0.219	0.872	0.219	PG/G	U	U	
Total TCDFs	30402143	0.871	0.872	0.146	PG/G	A	J	

*Analysis Method 1613B*

**Sample Name** HZBS0127S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** G341-588-7B **Sample Date:** 6/30/2009 9:20:00 AM **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	381	4.21	0.399	PG/G			
1,2,3,4,6,7,8-HpCDF	67562394	44.3	4.21	0.116	PG/G			
1,2,3,4,7,8,9-HpCDF	55673897	2.34	4.21	0.17	PG/G	A	J	
1,2,3,4,7,8-HxCDD	39227286	2.92	4.21	0.166	PG/G	A	J	
1,2,3,4,7,8-HxCDF	70648269	2.52	4.21	0.253	PG/G	A	J	
1,2,3,6,7,8-HxCDD	57653857	14.7	4.21	0.161	PG/G			
1,2,3,6,7,8-HxCDF	57117449	1.55	4.21	0.269	PG/G	A	J	
1,2,3,7,8,9-HxCDD	19408743	5.53	4.21	0.165	PG/G			
1,2,3,7,8,9-HxCDF	72918219	1.42	4.21	0.315	PG/G	A	J	
1,2,3,7,8-PeCDD	40321764	1.52	4.21	0.139	PG/G	A	J	
1,2,3,7,8-PeCDF	57117416	0.851	4.21	0.195	PG/G	A	J	
2,3,4,6,7,8-HxCDF	60851345	2.36	4.21	0.311	PG/G	A	J	
2,3,4,7,8-PeCDF	57117314	1.53	4.21	0.216	PG/G	A	J	
2,3,7,8-TCDD	1746016	0.314	0.842	0.314	PG/G	U	U	
2,3,7,8-TCDF	51207319	0.752	0.842	0.154	PG/G	A	J	*III
OCDD	3268879	3800	8.42	0.286	PG/G	E	J	*III
OCDF	39001020	150	8.42	0.275	PG/G			
Total HpCDDs	37871004	1450	4.21	0.399	PG/G			
Total HpCDFs	38998753	144	4.21	0.14	PG/G			
Total HxCDDs	34465468	96.3	4.21	0.164	PG/G			
Total HxCDFs	55684941	62.8	4.21	0.286	PG/G			
Total PeCDDs	36088229	12.1	4.21	0.139	PG/G			
Total PeCDFs	30402154	15.4	4.21	0.206	PG/G	Q	J	*III
Total TCDDs	41903575	4.13	0.842	0.314	PG/G			
Total TCDFs	30402143	8.21	0.842	0.117	PG/G			

*Analysis Method 1613B*

**Sample Name** HZBS0128S001 **Matrix Type:** Soil **Result Type:** Primary Result  
**Lab Sample Name:** G341-588-8B **Sample Date:** 6/30/2009 9:45:00 AM **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	165	4.2	0.238	PG/G			
1,2,3,4,6,7,8-HpCDF	67562394	16.6	4.2	0.139	PG/G			
1,2,3,4,7,8,9-HpCDF	55673897	0.857	4.2	0.213	PG/G	A	J	
1,2,3,4,7,8-HxCDD	39227286	2.38	4.2	0.19	PG/G	A	J	
1,2,3,4,7,8-HxCDF	70648269	1.18	4.2	0.129	PG/G	A	J	
1,2,3,6,7,8-HxCDD	57653857	6.48	4.2	0.193	PG/G			
1,2,3,6,7,8-HxCDF	57117449	0.781	4.2	0.129	PG/G	A	J	
1,2,3,7,8,9-HxCDD	19408743	4.29	4.2	0.193	PG/G			
1,2,3,7,8,9-HxCDF	72918219	0.571	4.2	0.143	PG/G	A	J	
1,2,3,7,8-PeCDD	40321764	1.88	4.2	0.256	PG/G	A	J	
1,2,3,7,8-PeCDF	57117416	0.462	4.2	0.244	PG/G	A	J	
2,3,4,6,7,8-HxCDF	60851345	0.917	4.2	0.14	PG/G	A	J	
2,3,4,7,8-PeCDF	57117314	0.697	4.2	0.285	PG/G	A	J	
2,3,7,8-TCDD	1746016	0.331	0.84	0.331	PG/G	EMPC	UJ	*III
2,3,7,8-TCDF	51207319	0.48	0.84	0.225	PG/G	A	J	*III
OCDD	3268879	2110	8.4	0.308	PG/G			
OCDF	39001020	53.2	8.4	0.233	PG/G			
Total HpCDDs	37871004	677	4.2	0.238	PG/G			
Total HpCDFs	38998753	49.7	4.2	0.171	PG/G			
Total HxCDDs	34465468	60	4.2	0.192	PG/G			
Total HxCDFs	55684941	23.6	4.2	0.135	PG/G			
Total PeCDDs	36088229	13	4.2	0.256	PG/G			
Total PeCDFs	30402154	7.61	4.2	0.264	PG/G			
Total TCDDs	41903575	4.05	0.84	0.195	PG/G			
Total TCDFs	30402143	4.92	0.84	0.225	PG/G			

*Analysis Method*    6020

<b>Sample Name</b>	FBQW2234	<b>Matrix Type:</b>	WATER			<b>Result Type:</b>	Primary Result	
<b>Lab Sample Name:</b>	232668011	<b>Sample Date:</b>	6/30/2009 12:30:00 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>
Copper	7440508	0.33	1	0.33	ug/L	U	U	
Lead	7439921	0.5	2	0.5	ug/L	U	U	

<b>Sample Name</b>	ILBS0251S002	<b>Matrix Type:</b>	SOIL			<b>Result Type:</b>	Primary Result	
<b>Lab Sample Name:</b>	232668013	<b>Sample Date:</b>	6/3/2009 12:30:00 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	50.2	2.14	0.427	mg/kg			

*Analysis Method*    7471A

<b>Sample Name</b>	ILBS0251S002	<b>Matrix Type:</b>	SOIL			<b>Result Type:</b>	Primary Result	
<b>Lab Sample Name:</b>	232668013	<b>Sample Date:</b>	6/3/2009 12:30:00 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>
Mercury	7439976	0.00439	0.0129	0.00439	mg/kg	U	UJ	B

*Analysis Method*    8015B

<b>Sample Name</b>	B1BS0080S002	<b>Matrix Type:</b>	SOIL			<b>Result Type:</b>	Primary Result	
<b>Lab Sample Name:</b>	232668018	<b>Sample Date:</b>	6/3/2009 7:50:00 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>
EFH (C12 - C14)	EFHD (C12	3.44	3.44	1.13	mg/kg	U	U	
EFH (C15 - C20)	EFHD (C15	3.44	3.44	1.13	mg/kg	U	U	
EFH (C21 - C30)	EFHD (C21	13.2	3.44	1.13	mg/kg	B		
EFH (C8 - C11)	EFHD (C8-	3.44	3.44	1.13	mg/kg	U	U	

Analysis Method 8082

**Sample Name** ILBS0249S002 **Matrix Type:** SOIL **Result Type:** Primary Result  
**Lab Sample Name:** 232668019 **Sample Date:** 6/3/2009 1:05:00 PM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016	12674112	17.9	17.9	5.97	ug/kg	U	UJ	H
Aroclor-1221	11104282	17.9	17.9	5.97	ug/kg	U	UJ	H
Aroclor-1232	11141165	17.9	17.9	5.97	ug/kg	U	UJ	H
Aroclor-1242	53469219	17.9	17.9	5.97	ug/kg	U	UJ	H
Aroclor-1248	12672296	17.9	17.9	5.97	ug/kg	U	UJ	H
Aroclor-1254	11097691	17.9	17.9	5.97	ug/kg	U	UJ	H
Aroclor-1260	11096825	17.9	17.9	5.97	ug/kg	U	UJ	H

**Sample Name** ILBS0250S001 **Matrix Type:** SOIL **Result Type:** Primary Result  
**Lab Sample Name:** 232668020 **Sample Date:** 6/3/2009 12:45:00 PM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016	12674112	3.65	3.65	1.22	ug/kg	U	UJ	H
Aroclor-1221	11104282	3.65	3.65	1.22	ug/kg	U	UJ	H
Aroclor-1232	11141165	3.65	3.65	1.22	ug/kg	U	UJ	H
Aroclor-1242	53469219	3.65	3.65	1.22	ug/kg	U	UJ	H
Aroclor-1248	12672296	3.65	3.65	1.22	ug/kg	U	UJ	H
Aroclor-1254	11097691	3.65	3.65	1.22	ug/kg	U	UJ	H
Aroclor-1260	11096825	3.65	3.65	1.22	ug/kg	U	UJ	H

**Sample Name** ILBS0251S001 **Matrix Type:** SOIL **Result Type:** Primary Result  
**Lab Sample Name:** 232668021 **Sample Date:** 6/3/2009 12:20:00 PM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016	12674112	3.48	3.48	1.16	ug/kg	U	UJ	H
Aroclor-1221	11104282	3.48	3.48	1.16	ug/kg	U	UJ	H
Aroclor-1232	11141165	3.48	3.48	1.16	ug/kg	U	UJ	H
Aroclor-1242	53469219	3.48	3.48	1.16	ug/kg	U	UJ	H
Aroclor-1248	12672296	3.48	3.48	1.16	ug/kg	U	UJ	H
Aroclor-1254	11097691	3.48	3.48	1.16	ug/kg	U	UJ	H
Aroclor-1260	11096825	3.48	3.48	1.16	ug/kg	U	UJ	H

*Analysis Method*    8082

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**Sample Name**    ILBS0253S001                      **Matrix Type:** SOIL                      **Result Type:** Primary Result  
**Lab Sample Name:**    232668022                      **Sample Date:** 6/3/2009 10:55:00 AM                      **Validation Level:** 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>
Aroclor-1016	12674112	18.5	18.5	6.17	ug/kg	U	UJ	H
Aroclor-1221	11104282	18.5	18.5	6.17	ug/kg	U	UJ	H
Aroclor-1232	11141165	18.5	18.5	6.17	ug/kg	U	UJ	H
Aroclor-1242	53469219	18.5	18.5	6.17	ug/kg	U	UJ	H
Aroclor-1248	12672296	18.5	18.5	6.17	ug/kg	U	UJ	H
Aroclor-1254	11097691	18.5	18.5	6.17	ug/kg	U	UJ	H
Aroclor-1260	11096825	18.5	18.5	6.17	ug/kg	U	UJ	H

*Analysis Method 8270C SIM*

**Sample Name** ENBS0082S001 **Matrix Type:** SOIL **Result Type:** Primary Result  
**Lab Sample Name:** 232668015 **Sample Date:** 6/2/2009 9:47:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1-Methylnaphthalene	90120	17	17	5.09	ug/kg	Uh	UJ	H
2-Methylnaphthalene	91576	17	17	3.39	ug/kg	Uh	UJ	H
Acenaphthene	83329	17	17	5.67	ug/kg	Uh	UJ	H
Acenaphthylene	208968	17	17	5.09	ug/kg	Uh	UJ	H
Anthracene	120127	17	17	3.39	ug/kg	Uh	UJ	H
Benzo(a)anthracene	56553	17	17	5.09	ug/kg	Uh	UJ	H
Benzo(a)pyrene	50328	17	17	5.09	ug/kg	Uh	UJ	H
Benzo(b)fluoranthene	205992	17	17	5.09	ug/kg	Uh	UJ	H
Benzo(ghi)perylene	191242	17	17	5.09	ug/kg	Uh	UJ	H
Benzo(k)fluoranthene	207089	17	17	5.09	ug/kg	Uh	UJ	H
bis(2-Ethylhexyl)phthalate	117817	17	17	5.6	ug/kg	BJh	UJ	H, B, result changed from 10.6
Butyl benzyl phthalate	85687	17	17	5.09	ug/kg	Uh	UJ	H
Chrysene	218019	17	17	5.09	ug/kg	Uh	UJ	H
Dibenzo(a,h)anthracene	53703	17	17	5.09	ug/kg	Uh	UJ	H
Diethylphthalate	84662	17	17	5.09	ug/kg	Uh	UJ	H
Dimethylphthalate	131113	17	17	5.09	ug/kg	Uh	UJ	H
Di-n-butylphthalate	84742	17	17	5.09	ug/kg	Uh	UJ	H
Di-n-octyl-phthalate	117840	17	17	5.09	ug/kg	Uh	UJ	H
Fluoranthene	206440	17	17	5.09	ug/kg	Uh	UJ	H
Fluorene	86737	17	17	5.09	ug/kg	Uh	UJ	H
Indeno(1,2,3-cd)pyrene	193395	17	17	5.09	ug/kg	Uh	UJ	H
Naphthalene	91203	17	17	5.09	ug/kg	Uh	UJ	H
n-Nitrosodimethylamine	62759	17	17	3.39	ug/kg	Uh	UJ	H
Phenanthrene	85018	17	17	5.09	ug/kg	Uh	UJ	H
Pyrene	129000	17	17	5.33	ug/kg	Uh	UJ	H

*Analysis Method 8270C SIM*

**Sample Name** ENBS0083S001 **Matrix Type:** SOIL **Result Type:** Primary Result  
**Lab Sample Name:** 232668016 **Sample Date:** 6/2/2009 10:05:00 AM **Validation Level:** V

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1-Methylnaphthalene	90120	16.9	16.9	5.08	ug/kg	Uh	UJ	H
2-Methylnaphthalene	91576	16.9	16.9	3.38	ug/kg	Uh	UJ	H
Acenaphthene	83329	16.9	16.9	5.65	ug/kg	Uh	UJ	H
Acenaphthylene	208968	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Anthracene	120127	16.9	16.9	3.38	ug/kg	Uh	UJ	H
Benzo(a)anthracene	56553	5.08	16.9	5.08	ug/kg	Jh	J	H
Benzo(a)pyrene	50328	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Benzo(b)fluoranthene	205992	8.88	16.9	5.08	ug/kg	Jh	J	H
Benzo(ghi)perylene	191242	5.19	16.9	5.08	ug/kg	Jh	J	H
Benzo(k)fluoranthene	207089	16.9	16.9	5.08	ug/kg	Uh	UJ	H
bis(2-Ethylhexyl)phthalate	117817	16.9	16.9	5.58	ug/kg	BJh	UJ	H, B, result changed from 14.4
Butyl benzyl phthalate	85687	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Chrysene	218019	5.91	16.9	5.08	ug/kg	Jh	J	H
Dibenzo(a,h)anthracene	53703	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Diethylphthalate	84662	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Dimethylphthalate	131113	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Di-n-butylphthalate	84742	6.7	16.9	5.08	ug/kg	Jh	J	H
Di-n-octyl-phthalate	117840	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Fluoranthene	206440	5.64	16.9	5.08	ug/kg	Jh	J	H
Fluorene	86737	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Indeno(1,2,3-cd)pyrene	193395	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Naphthalene	91203	16.9	16.9	5.08	ug/kg	Uh	UJ	H
n-Nitrosodimethylamine	62759	16.9	16.9	3.38	ug/kg	Uh	UJ	H
Phenanthrene	85018	16.9	16.9	5.08	ug/kg	Uh	UJ	H
Pyrene	129000	6.63	16.9	5.31	ug/kg	Jh	J	H

*Analysis Method 8270C SIM*

**Sample Name** ENBS0084S001 **Matrix Type:** SOIL **Result Type:** Primary Result  
**Lab Sample Name:** 232668017 **Sample Date:** 6/2/2009 10:17:00 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	5.14	ug/kg	Uh	UJ	H
2-Methylnaphthalene	91576	17.1	17.1	3.42	ug/kg	Uh	UJ	H
Acenaphthene	83329	17.1	17.1	5.72	ug/kg	Uh	UJ	H
Acenaphthylene	208968	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Anthracene	120127	17.1	17.1	3.42	ug/kg	Uh	UJ	H
Benzo(a)anthracene	56553	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Benzo(a)pyrene	50328	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Benzo(b)fluoranthene	205992	7.9	17.1	5.14	ug/kg	Jh	J	H
Benzo(ghi)perylene	191242	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Benzo(k)fluoranthene	207089	17.1	17.1	5.14	ug/kg	Uh	UJ	H
bis(2-Ethylhexyl)phthalate	117817	34.9	34.9	5.65	ug/kg	Bh	UJ	H, B, RL changed from 17.1
Butyl benzyl phthalate	85687	12.3	17.1	5.14	ug/kg	Jh	J	H
Chrysene	218019	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Dibenzo(a,h)anthracene	53703	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Diethylphthalate	84662	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Dimethylphthalate	131113	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Di-n-butylphthalate	84742	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Di-n-octyl-phthalate	117840	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Fluoranthene	206440	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Fluorene	86737	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Indeno(1,2,3-cd)pyrene	193395	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Naphthalene	91203	17.1	17.1	5.14	ug/kg	Uh	UJ	H
n-Nitrosodimethylamine	62759	17.1	17.1	3.42	ug/kg	Uh	UJ	H
Phenanthrene	85018	17.1	17.1	5.14	ug/kg	Uh	UJ	H
Pyrene	129000	5.48	17.1	5.37	ug/kg	Jh	J	H