# Chain of Custody and Supporting Documentation

BOEING

# CHAIN OF CUSTODY RECORD

237938

COC #: MWHMB20090925_00

Page: 1 of 1

| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | M. Baumgardner | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| Address: | 2121 N. California Blvd | Project Manager: | Alex Fischl | | | | |
| | Suite 600 | PM Phone #: | (925) 627-4627 | | | | |
| | Walnut Creek | Field Contact: | Benjamin Stewart | | | | |
| | CA | Field Contact #: | (818) 266-1378 | | | | |
| | 94596 | Lab Name: | GEL Laboratories, LLC | | | | |
| Email: | sarah.vonraesfeld@mwhglobal.c | Lab Contact: | Jackie Trudell | | | | |
| | sean.leffler@mwhglobal.com | Lab Address: | 2040 Savage Road | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Metals 6020 Soil Copper | Comments |
|---|---|---|---|---|---|---|---|---|
| HZET0710S001 | Soil | 9/25/2009 | 7:15 | 2 | 5 | 5 | 5 | |
| HZET0717S001 | Soil | 9/25/2009 | 7:25 | 2 | 5 | 5 | 5 | |

Requested Analyses

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 bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| Allison M. Porter | 9-25-09 | Mike Kemlow | 9-26-09 | | | | |
| Company: MWH | Time: 14:54 | Company: GEL | Time: 0840 | Company: | Time: | Company: | Time: |

Comments: SAMPLE VOLUME FOR DIOXIN ANALYSIS SHIPPED DIRECTLY TO CFA, SAMPLE VOLUME FOR METALS ANALYSIS SHIPPED TO GEL.

Geotracker EDF ☐

Data Validation Package ☑ Level IV

GEL Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| **Client:** SSFL/MWH | **SDG/ARCOC/Work Order:** 237938 |
| **Received By:** MK | **Date Received:** 9-26-09 |

| **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? | | ✓ | Maximum Counts Observed*: Cpm 20 |
| Classified Radioactive II or III by RSO? | | ✓ | |
| COC/Samples marked containing PCBs? | | ✓ | |
| Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#: |
| Samples identified as Foreign Soil? | | ✓ | |

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

Comments:

FM # 7969 7787 7140

PM (or PMA) review: Initials MC Date 09/26/09

# LABORATORY TASK ORDER (LTO) FORM

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

**Event Name:** ISRA Sampling, August 2009 **Start:** 8/24/2009 **End:** 9/30/2009

**LTO DATE:** **LTO NUMBER:**

| | | | |
|---|---|---|---|
| **Consultant Name:** | MWH | **Contract Laboratory:** | GEL |
| Address: | 2121 N. California Blvd. Ste. 600<br>Walnut Creek, CA 94596 | Address: | 2040 Savage Rd.<br>Charleston, SC 29407 |
| **Contact Name:** | Sarah Von Raesfeld | **Lab Contact Name:** | Jackie Trudell |
| Phone Number: | 925-627-4654 | Phone Number: | 843-769-7388 |
| Fax Number: | 925-627-4501 | Fax Number: | 843-766-1178 |
| E-mail Address: | Sarah.VonRaesfeld@mwhglobal.com | E-mail Address: | jacqueline.trudell@gel.com |

## SAMPLE CONTAINER ORDER FORM

**Date Required:**

**Date Sample Pickup:**

**Ship Containers To:**

Project Site _____ *(enter "X")*
Consultant Office _____ *(enter "X")*
Other Location (specify in comments) _____ *(enter "X")*

**Container Information:**

Trip Blank (VOA only) No *(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 X *(select all applicable)*
Water X *(select all applicable)*
Vapor _____ *(select all applicable)*

Est. Total # of Samples: 175 Est. Total # of EDDs 40

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

| | Water | Soil | Contingent |
|---|---|---|---|
| **Dioxins (1613B)** | **15** | **124** | **0** |
| EPA 8015M (DRO) | -- | -- | -- |
| EPA 8015M (JET FUEL) | -- | -- | -- |
| EPA 8015M (CC) | -- | -- | -- |
| **TCE (8260B)** | **5** | **12** | **0** |
| EPA 8270C SIM (SVOC) | -- | -- | -- |
| EPA 8310 (PAH) | -- | -- | -- |
| **EPA 8082 (PCB)** | **3** | **5** | **0** |
| **Nickel (6020)** | **5** | **10** | **0** |
| **Chromium (6020)** | **5** | **10** | **0** |
| **Silver (6020)** | **5** | **10** | **0** |
| **Cadmium (6020)** | **10** | **35** | **0** |
| **Arsenic (6020)** | **5** | **10** | **0** |
| **% Moisture (D2216)** | **0** | **170** | **0** |
| **Lead (6020)** | **10** | **65** | **0** |
| **Copper (6020)** | **10** | **75** | **0** |
| **Zinc (6020)** | **5** | **20** | **0** |
| **Mercury by 7471A/7470A** | **5** | **25** | **0** |

## LABORATORY REPORTING REQUIREMENTS

**Project TAT:**

Normal: X (10 Business days)
RUSH: 5 (Specify- 24 / 48 / 72HRS)
Other : _____ (Specify # of Days)
Report Due Date:

**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)

**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

Send Original Reports To:

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

## SPECIAL INSTRUCTIONS/LTO NOTES

## CONFIRMATION OF TRANSMITTAL & RECEIPT

**LTO Sent By:**

Name: Sarah Von Raesfeld
Date: 09/02/09

**LTO Received By-**

Name:
Date:

# 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. |

Table of Contents

# Case Narrative

**Case Narrative**
**for**
**Boeing - SSFL (MWH)**
**Work Order: 237938**
**SDG: 237938**

**October 08, 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 September 26, 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:

| Laboratory Identification | Sample Description |
|---|---|
| 237938001 | HZET0710S001 |
| 237938002 | HZET0717S001 |

**Items of Note**

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

**Case Narrative**

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

**Data Package:**

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

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

Jacqueline A Trudell

Jacqueline Trudell
Percent Moisture

# Laboratory Certifications

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

| State | Certification |
|---|---|
| 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: 237938

Prepared by

MEC$^X$, 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: | 237938 |
| Project Manager: | Dixie Hambrick |
| Matrix: | soil |
| QC Level: | V |
| No. of Samples: | 2 |
| No. of Reanalyses/Dilutions: | 0 |
| Laboratory: | GEL |

**Table 1. Sample Identification**

| *Sample Name* | *Lab Sample Name* | *Sub-Lab Sample Name* | *Matrix* | *Collection* | *Method* |
|---|---|---|---|---|---|
| HZET0710S001 | 237938001 | 1075001 | SOIL | 9/25/2009 7:15:00 AM | 1613B, 6020 |
| HZET0717S001 | 237938002 | 1075002 | SOIL | 9/25/2009 7:25:00 AM | 1613B, 6020 |

# II. Sample Management

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

## Data Qualifier Reference Table

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

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

## Qualification Code Reference Table

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

## Qualification Code Reference Table Cont.

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

# III. Method Analyses

## A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: P. Meeks
Date Reviewed: October 13, 2009

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

- Holding Times: Extraction and analytical holding times were met. The samples were extracted and analyzed within one year of collection.

- Instrument Performance: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: The soil method blank had detects for all but five target compounds. Individual isomers detected below the reporting limit or at concentrations less than 5× the method blank concentration were qualified as nondetected, "U," at the reporting limit if detected below the reporting limit or at the level of contamination if detected above. All totals, except TCDF and TCDD, were qualified as estimated, "J," due to detects in the soil method blank.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613 and the RPDs were within the laboratory-established control limits.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: The samples in this SDG had no identified field blank or equipment rinsate.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.

- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The laboratory

performed and reported confirmation analyses for the TCDF detects. As the confirmation analyses resulted in results similar to the original analyses, the reviewer rejected, "R," the confirmation analyses.

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. The laboratory calculated and reported compound-specific detection limits (EDLs). EMPCs were identified in the samples of this SDG and qualified with a "K" by the laboratory. Any EMPC was qualified as estimated, "UJ," in the samples of this SDG. EMPCs reported as totals were qualified as estimated, "J," as only a portion of the total was identified as an EMPC. Any detect below the laboratory lower calibration level was qualified as estimated, "J." Nondetects are valid to the estimated detection limit (EDL).

## B. EPA METHOD 6020—Copper

Reviewed By: P. Meeks
Date Reviewed: October 14, 2009

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

- Holding Times: The analytical holding time, six months for ICP-MS metals, was met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on HZET0710S001. The RPD was within the method-established control limit.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZET0710S001. Both recoveries were above the control limit; therefore, copper detected in the samples was qualified as estimated, "J." The RPD was within method-established QC limits.

- Serial Dilution: A serial dilution analysis was performed on HZET0710S001. The %D exceeded the control limit; therefore, copper detected in the samples was qualified as estimated, "J."

- Internal Standards Performance: Review is not applicable at a Level V validation.

- Sample Result Verification: Review is not applicable at a Level V validation. As the samples in this SDG were validated at Level V, the QC information necessary to make an absolute determination of bias in the samples was not reviewed; therefore, when qualifications were applied, no bias was assigned. The soil results were reported from the laboratory's standard 2× dilution for soils. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank associated with the samples in this SDG. Copper was not detected in this sample. The samples in this SDG had no associated equipment rinsate.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

# Validated Sample Result Forms: 237938

## *Analysis Method 1613B*

**Sample Name** HZET0710S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 1075001 **Sample** 9/25/2009 7:15:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 4.56 | 2.28 | 0.392 | pg/g | | | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 2.28 | 2.28 | 2.28 | pg/g | J | U | B, result changed from 0.854 and EDL from |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.409 | 2.28 | 0.409 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.788 | 2.28 | 0.193 | pg/g | J | J | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 2.28 | 2.28 | 2.28 | pg/g | JK | UJ | *III, result changed from 0.215 and |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.219 | 2.28 | 0.219 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 2.28 | 2.28 | 2.28 | pg/g | J | U | B, result changed from 0.569 and EDL from |
| 1,2,3,7,8,9-HxCDD | 19408743 | 1.19 | 2.28 | 0.215 | pg/g | J | J | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.431 | 2.28 | 0.237 | pg/g | J | J | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.166 | 2.28 | 0.138 | pg/g | J | J | |
| 1,2,3,7,8-PeCDF | 57117416 | 2.28 | 2.28 | 2.28 | pg/g | JK | UJ | *III, result changed from 0.203 and |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.173 | 2.28 | 0.173 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 2.28 | 2.28 | 2.28 | pg/g | JK | UJ | *III, result changed from 0.241 and |
| 2,3,7,8-TCDD | 1746016 | 0.145 | 0.456 | 0.145 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.456 | 0.456 | 0.456 | pg/g | J | U | B, result changed from 0.338 and EDL from |
| 2,3,7,8-TCDF | 51207319 | 0.407 | 0.456 | 0.0955 | pg/g | J | R | D |
| OCDD | 3268879 | 45.6 | 4.56 | 0.854 | pg/g | | | |
| OCDF | 39001020 | 2.7 | 4.56 | 0.891 | pg/g | J | J | |
| Total HpCDD | 37871004 | 13.2 | 2.28 | 0.392 | pg/g | | J | B |
| Total HpCDF | 38998753 | 1.94 | 2.28 | 0.192 | pg/g | J | J | B |

*Analysis Method* *1613B*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Total HxCDD | 34465468 | 2.99 | 2.28 | 0.193 | pg/g | | J | B |
| Total HxCDF | 55684941 | 1.8 | 2.28 | 0.15 | pg/g | J | J | B, *III |
| Total PeCDD | 36088229 | 0.166 | 2.28 | 0.138 | pg/g | J | J | B |
| Total PeCDF | 30402154 | 0.911 | 2.28 | 0.0809 | pg/g | J | J | B, *III |
| Total TCDD | 41903575 | 0.161 | 0.456 | 0.145 | pg/g | J | J | |
| Total TCDFs | 55722275 | 0.635 | 0.456 | 0.212 | pg/g | B | | |

*Analysis Method 1613B*

**Sample Name** HZET0717S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 1075002 **Sample** 9/25/2009 7:25:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 294 | 2.12 | 1.06 | pg/g | | | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 41.2 | 2.12 | 0.243 | pg/g | | | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 1.97 | 2.12 | 0.547 | pg/g | J | J | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 5.39 | 2.12 | 0.236 | pg/g | | | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 2.12 | 2.12 | 2.12 | pg/g | JK | UJ | *III, result changed from 0.662 and |
| 1,2,3,6,7,8-HxCDD | 57653857 | 1.97 | 2.12 | 0.294 | pg/g | J | J | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 2.12 | 2.12 | 2.12 | pg/g | J | U | B, result changed from 0.511 and EDL from |
| 1,2,3,7,8,9-HxCDD | 19408743 | 3.32 | 2.12 | 0.277 | pg/g | | | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.197 | 2.12 | 0.197 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.486 | 2.12 | 0.127 | pg/g | J | J | |
| 1,2,3,7,8-PeCDF | 57117416 | 2.12 | 2.12 | 2.12 | pg/g | JK | UJ | *III, result changed from 0.224 and |
| 2,3,4,6,7,8-HxCDF | 60851345 | 2.12 | 2.12 | 2.12 | pg/g | JK | UJ | *III, result changed from 0.693 and |
| 2,3,4,7,8-PeCDF | 57117314 | 2.12 | 2.12 | 2.12 | pg/g | JK | UJ | *III, result changed from 0.301 and |
| 2,3,7,8-TCDD | 1746016 | 0.16 | 0.425 | 0.16 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.438 | 0.425 | 0.104 | pg/g | | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.425 | 0.425 | 0.425 | pg/g | J | U | B, result changed from 0.385 and EDL from |
| OCDD | 3268879 | 3050 | 4.25 | 1.06 | pg/g | | | |
| OCDF | 39001020 | 201 | 4.25 | 0.557 | pg/g | | | |
| Total HpCDD | 37871004 | 905 | 2.12 | 1.06 | pg/g | | J | B |
| Total HpCDF | 38998753 | 151 | 2.12 | 0.243 | pg/g | | J | B |

*Analysis Method* *1613B*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Total HxCDD | 34465468 | 44.2 | 2.12 | 0.236 | pg/g | | J | B |
| Total HxCDF | 55684941 | 20.5 | 2.12 | 0.15 | pg/g | | J | B, *III |
| Total PeCDD | 36088229 | 3.18 | 2.12 | 0.127 | pg/g | | J | B |
| Total PeCDF | 30402154 | 3.56 | 2.12 | 0.0593 | pg/g | | J | B, *III |
| Total TCDD | 41903575 | 0.742 | 0.425 | 0.16 | pg/g | | | |
| Total TCDFs | 55722275 | 1.63 | 0.425 | 0.209 | pg/g | B | | |

*Analysis Method 6020*

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | HZET0710S001 | **Matrix Type:** | Soil | **Result Type:** | Primary |
| **Lab Sample Name:** | 237938001 | **Sample** | 9/25/2009 7:15:00 AM | **Validation** | V |

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 12.4 | 0.212 | 0.0699 | mg/kg | EN | J | Q, A |

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | HZET0717S001 | **Matrix Type:** | Soil | **Result Type:** | Primary |
| **Lab Sample Name:** | 237938002 | **Sample** | 9/25/2009 7:25:00 AM | **Validation** | V |

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 13 | 0.209 | 0.0691 | mg/kg | EN | J | Q, A |

# Chain of Custody and Supporting Documentation

238077

# CHAIN OF CUSTODY RECORD

COC #: MWHAG20090929_01



| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | A. Goldenberg | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| Address: | 2121 N. California Blvd | Project Manager: | Alex Fischl | | | | |
| | Suite 600 | PM Phone #: | (925) 627-4627 | | | | |
| | Walnut Creek | Field Contact: | Benjamin Stewart | | | | |
| | CA | Field Contact #: | (818) 266-1378 | | | | |
| | 94596 | Lab Name: | GEL Laboratories, LLC | | | | |
| Email: | sarah.vonraesfeld@mwhglobal.c | Lab Contact: | Jackie Trudell | | | | |
| | sean.leffler@mwhglobal.com | Lab Address: | 2040 Savage Road | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Metals 6020 Soil Arsenic | Metals 6020 Soil Cadmium | Metals 6020 Soil Chromium | Metals 6020 Soil Copper | Metals 6020 Soil Lead | Metals 6020 Soil Nickel | Metals 6020 Soil Silver | Metals 6020 Soil Zinc | Metals 7471A Soil Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HZET0104S001 | Soil | 9/29/2009 | 13:20 | 2 | 5 | 5 | | 5 | | | 5 | | | 5 | | | | | | |
| HZET0105S001 | Soil | 9/29/2009 | 13:35 | 2 | 5 | 5 | | 5 | | | 5 | | | 5 | | | | | | |
| HZET0230S001 | Soil | 9/29/2009 | 10:25 | 1 | 5 | | | | | | 5 | | | | | | | | | |
| HZET0231S001 | Soil | 9/29/2009 | 10:15 | 1 | 5 | | | | | | 5 | | | | | | | | | |
| HZET0232S001 | Soil | 9/29/2009 | 10:05 | 1 | 5 | | | | | | 5 | | | | | | | | | |
| HZET0233S001 | Soil | 9/29/2009 | 11:10 | 1 | 5 | | | | | | 5 | | | | | | | | | |
| HZET0234S001 | Soil | 9/29/2009 | 11:20 | 1 | 5 | | | | | | 5 | | | | | | | | | |
| HZET0235S001 | Soil | 9/29/2009 | 11:00 | 1 | 5 | | | | | | 5 | | | | | | | | | |
| HZET0236S001 | Soil | 9/29/2009 | 11:30 | 1 | 5 | | | | | | 5 | | | | | | | | | |
| HZET0304S001 | Soil | 9/29/2009 | 8:45 | 1 | 5 | | | | | 5 | 5 | | | | | | | | | |

Requested Analyses

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 bellow are Turn Around Times.

Comments

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| Allison M. Fischl | 9-29-09 | Richard Arkin | 9/30/09 | | | | |
| Company: MWH | Time: 15:56 | Company: GEL | Time: 0845 | Company: | Time: | Company: | Time: |

Comments: SAMPLE VOLUME FOR DIOXIN ANALYSIS SHIPPED DIRECTLY TO CFA, SAMPLE VOLUME FOR METALS ANALYSIS SHIPPED TO GEL-

Geotracker EDF ☐

Data Validation Package ☑ Level IV

5

238077

BOEING

# CHAIN OF CUSTODY RECORD

COC #: MWHAG20090929_01



| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | A. Goldenberg | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| Address: | 2121 N. California Blvd | Project Manager: | Alex Fischl | | | | |
| | Suite 600 | PM Phone #: | (925) 627-4627 | | | | |
| | Walnut Creek | Field Contact: | Benjamin Stewart | | | | |
| | CA | Field Contact #: | (818) 266-1378 | | | | |
| | 94596 | Lab Name: | GEL Laboratories, LLC | | | | |
| Email: | sarah.vonraesfeld@mwhglobal.c | Lab Contact: | Jackie Trudell | | | | |
| | sean.leffler@mwhglobal.com | Lab Address: | 2040 Savage Road | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Metals 6020 Soil Arsenic | Metals 6020 Soil Cadmium | Metals 6020 Soil Chromium | Metals 6020 Soil Copper | Metals 6020 Soil Lead | Metals 6020 Soil Nickel | Metals 6020 Soil Silver | Metals 6020 Soil Zinc | Metals 7471A Soil Mercury | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HZET0305S001 | Soil | 9/29/2009 | 8:30 | 1 | 5 | | | | | 5 | 5 | | | | | | | | | |
| HZET0508S001 | Soil | 9/29/2009 | 9:00 | 1 | 5 | | 5 | 5 | 5 | 5 | | 5 | 5 | | 5 | | | | | |
| HZET0808S001 | Soil | 9/29/2009 | 8:00 | 2 | 5 | 5 | | | | | | | | | | | | | | |

Requested Analyses

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 bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| Allan M. Rabb | 9-29-09 | Richard Anderson | 9/30/09 | | | | |
| Company: MWH | Time: 15:56 | Company: GEL | Time: 0845 | Company: | Time: | Company: | Time: |

Comments: SAMPLE VOLUME FOR DIOXIN ANALYSIS SHIPPED DIRECTLY TO CFA, SAMPLE VOLUME FOR METALS ANALYSIS SHIPPED TO GEL.

Geotracker EDF ☐

Data Validation Package ☑ Level IV

6

GEL Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| **Client:** SSFL | **SDG/ARCOC/Work Order:** 238077 |
| **Received By:** Ricky Albar | **Date Received:** 9/30/09 |

| **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? | | ✓ | Maximum Counts Observed*: 40 cpm |
| Classified Radioactive II or III by RSO? | | ✓ | |
| COC/Samples marked containing PCBs? | | ✓ | |
| Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#: |
| Samples identified as Foreign Soil? | | ✓ | |

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

Comments: FedEx 9457 3163 0821

PM (or PMA) review: Initials TT Date 9/30/09

# LABORATORY TASK ORDER (LTO) FORM

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

**Event Name:** ISRA Sampling, August 2009 **Start:** 8/24/2009 **End:** 9/30/2009

**LTO DATE:** **LTO NUMBER:**

| | | | |
|---|---|---|---|
| **Consultant Name:** | MWH | **Contract Laboratory:** | GEL |
| Address: | 2121 N. California Blvd. Ste. 600 | Address: | 2040 Savage Rd. |
| | Walnut Creek, CA 94596 | | Charleston, SC 29407 |
| **Contact Name:** | Sarah Von Raesfeld | **Lab Contact Name:** | Jackie Trudell |
| Phone Number: | 925-627-4654 | Phone Number: | 843-769-7388 |
| Fax Number: | 925-627-4501 | Fax Number: | 843-766-1178 |
| E-mail Address: | Sarah.VonRaesfeld@mwhglobal.com | E-mail Address: | jacqueline.trudell@gel.com |

## SAMPLE CONTAINER ORDER FORM

**Date Required:**

**Date Sample Pickup:**

**Ship Containers To:**

Project Site ___ *(enter "X")*
Consultant Office ___ *(enter "X")*
Other Location (specify in comments) ___ *(enter "X")*

**Container Information:**

Trip Blank (VOA only) No *(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 X *(select all applicable)*
Water X *(select all applicable)*
Vapor ___ *(select all applicable)*

Est. Total # of Samples: 175 Est. Total # of EDDs 40

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

| | Water | Soil | Contingent |
|---|---|---|---|
| **Dioxins (1613B)** | **15** | **124** | **0** |
| EPA 8015M (DRO) | -- | -- | -- |
| EPA 8015M (JET FUEL) | -- | -- | -- |
| EPA 8015M (CC) | -- | -- | -- |
| **TCE (8260B)** | **5** | **12** | **0** |
| EPA 8270C SIM (SVOC) | -- | -- | -- |
| EPA 8310 (PAH) | -- | -- | -- |
| **EPA 8082 (PCB)** | **3** | **5** | **0** |
| **Nickel (6020)** | **5** | **10** | **0** |
| **Chromium (6020)** | **5** | **10** | **0** |
| **Silver (6020)** | **5** | **10** | **0** |
| **Cadmium (6020)** | **10** | **35** | **0** |
| **Arsenic (6020)** | **5** | **10** | **0** |
| **% Moisture (D2216)** | **0** | **170** | **0** |
| **Lead (6020)** | **10** | **65** | **0** |
| **Copper (6020)** | **10** | **75** | **0** |
| **Zinc (6020)** | **5** | **20** | **0** |
| **Mercury by 7471A/7470A** | **5** | **25** | **0** |

## LABORATORY REPORTING REQUIREMENTS

**Project TAT:**

Normal: X (10 Business days)
RUSH: 5 (Specify- 24 / 48 / 72HRS)
Other : ___ (Specify # of Days)
Report Due Date:

**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)

**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

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

## SPECIAL INSTRUCTIONS/LTO NOTES

## CONFIRMATION OF TRANSMITTAL & RECEIPT

**LTO Sent By:**
Name: Sarah Von Raesfeld
Date: 09/02/09

**LTO Received By-**
Name:
Date:

# DATA VALIDATION REPORT

Boeing SSFL RFI ISRA

SAMPLE DELIVERY GROUP: 238077

Prepared by

MEC$^X$, 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: | 238077 |
| Project Manager: | Dixie Hambrick |
| Matrix: | water/soil |
| QC Level: | V |
| No. of Samples: | 13 |
| No. of Reanalyses/Dilutions: | 0 |
| Laboratory: | GEL |

**Table 1. Sample Identification**

| *Sample Name* | *Lab Sample Name* | *Sub-Lab Sample Name* | *Matrix* | *Collection* | *Method* |
|---|---|---|---|---|---|
| | | | | | |
| HZET0808S001 | 238077013 | 1081003 | Soil | 9/29/2009 8:00:00 AM | 1613B |
| HZET0104S001 | 238077001 | 1081001 | Soil | 9/29/2009 1:20:00 PM | 1613B, 6020 |
| HZET0105S001 | 238077002 | 1081002 | Soil | 9/29/2009 1:35:00 PM | 1613B, 6020 |
| HZET0230S001 | 238077003 | N/A | Soil | 9/29/2009 10:25:00 AM | 6020 |
| HZET0231S001 | 238077004 | N/A | Soil | 9/29/2009 10:15:00 AM | 6020 |
| HZET0232S001 | 238077005 | N/A | Soil | 9/29/2009 10:05:00 AM | 6020 |
| HZET0233S001 | 238077006 | N/A | Soil | 9/29/2009 11:10:00 AM | 6020 |
| HZET0234S001 | 238077007 | N/A | Soil | 9/29/2009 11:20:00 AM | 6020 |
| HZET0235S001 | 238077008 | N/A | Soil | 9/29/2009 11:00:00 AM | 6020 |
| HZET0236S001 | 238077009 | N/A | Soil | 9/29/2009 11:30:00 AM | 6020 |
| HZET0304S001 | 238077010 | N/A | Soil | 9/29/2009 8:45:00 AM | 6020 |
| HZET0305S001 | 238077011 | N/A | Soil | 9/29/2009 8:30:00 AM | 6020 |
| HZET0508S001 | 238077012 | N/A | Soil | 9/29/2009 9:00:00 AM | 6010B, 6020, 7471A, |

# II. Sample Management

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

## Data Qualifier Reference Table

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

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

## Qualification Code Reference Table

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

## Qualification Code Reference Table Cont.

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

# III. Method Analyses

## A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: P. Meeks
Date Reviewed: October 21, 2009

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

- Holding Times: Extraction and analytical holding times were met. The samples were extracted and analyzed within one year of collection.

- Instrument Performance: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: The soil method blank had detects for all target compounds except 2,3,7,8-TCDD and total TCDD. Individual isomers detected below the reporting limit or at concentrations less than 5× the method blank concentration were qualified as nondetected, "U," at the reporting limit if detected below the reporting limit or at the level of contamination if detected above. In cases where the total concentration was equal to the concentration of the individual isomer, totals were also qualified as nondetected, "U," at the reporting limit if detected below the reporting limit or at the level of contamination if detected above. The remaining totals were qualified as estimated, "J."

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613 and the RPDs were within the laboratory-established control limits.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank associated with the samples in this SDG; however, this sample was not analyzed for dioxins. The samples in this SDG had no identified equipment rinsate.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.

- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The laboratory performed and reported confirmation analyses for all 2,3,7,8-TCDF detects. As the confirmation analyses resulted in results similar to the original analyses, the reviewer rejected, "R," the confirmation analyses in all samples except HZET0105S001 in favor of the original analyses. The original 2,3,7,8-TCDF result for HZET0105S001 was reported as an estimated maximum possible concentration (EMPC); however, as the confirmation result was not reported as an EMPC, the reviewer rejected, "R," the original result in favor of the confirmation result in HZET0105S001

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. The laboratory calculated and reported compound-specific detection limits. EMPCs were identified in the samples of this SDG and qualified with a "K" by the laboratory. Any EMPC was qualified as estimated, "UJ," in the samples of this SDG. EMPCs reported as totals were qualified as estimated, "J," as only a portion of the total was identified as an EMPC. Any detect below the laboratory lower calibration level was qualified as estimated, "J." Nondetects are valid to the estimated detection limit (EDL).

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

Reviewed By: P. Meeks
Date Reviewed: October 21, 2009

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

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.

- Tuning: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation; however, the reviewer noted that the mercury CRDL recovery was below the control limit at 66%. Mercury detected in HZET0508S001 was qualified as estimated, "J."

- Blanks: Mercury was reported in the method blank at -0.00449 mg/kg; therefore, mercury detected in HZET0508S001 was qualified as estimated, "J." Method blanks and CCBs had no other detects.

- Interference Check Samples: Review is not applicable at a Level V validation.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on HZET0508S001 for mercury and silver and on HZET0104S001 for arsenic, cadmium, chromium, copper, lead, nickel, and zinc. The RPDs were within the method-established control limit.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZET0508S001 for mercury and silver and on HZET0104S001 for arsenic, cadmium, chromium, copper, lead, nickel, and zinc. The chromium MSD recovery was above the control limit; therefore, chromium detected in HZET0508S001 was qualified as estimated, "J." All remaining recoveries and all RPDs were within laboratory-established QC limits.

- Serial Dilution: Serial dilution analyses were performed on HZET0508S001 for mercury and silver and on HZET0104S001 for arsenic, cadmium, chromium, copper, lead, nickel, and zinc. 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. Copper in HZET0304S001 and HZET0305S001 and several ICP-MS analytes in HZET0508S001 were reported from 10× dilutions due to matrix interference. The remaining ICP-MS analytes were reported from the laboratory's standard 2× dilution for soils. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was identified as the field blank associated with the samples in this SDG. There were no applicable detects in this sample. This SDG had no identified equipment rinsate.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

# Validated Sample Result Forms: 238077

## *Analysis Method 1613B*

**Sample Name** HZET0104S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 1081001 **Sample** 9/29/2009 1:20:00 PM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 4.16 | 4.16 | 4.16 | pg/g | | U | B, RL changed from 2.3 and EDL from 0.346 |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 2.3 | 2.3 | 2.3 | pg/g | JK | UJ | *III, result changed from 0.735 and EDL from 0.172 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.329 | 2.3 | 0.329 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.234 | 2.3 | 0.234 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 2.3 | 2.3 | 2.3 | pg/g | JK | UJ | *III, result changed from 0.186 and EDL from 0.131 |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.316 | 2.3 | 0.272 | pg/g | J | J | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.141 | 2.3 | 0.141 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.265 | 2.3 | 0.265 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.193 | 2.3 | 0.193 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.156 | 2.3 | 0.156 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 2.3 | 2.3 | 2.3 | pg/g | J | U | B, result changed from 0.515 and EDL from 0.145 |
| 2,3,4,6,7,8-HxCDF | 60851345 | 2.3 | 2.3 | 2.3 | pg/g | JK | UJ | *III, result changed from 0.18 and EDL from 0.14 |
| 2,3,4,7,8-PeCDF | 57117314 | 2.3 | 2.3 | 2.3 | pg/g | J | U | B, result changed from 0.224 and EDL from 0.154 |
| 2,3,7,8-TCDD | 1746016 | 0.147 | 0.46 | 0.147 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.831 | 0.46 | 0.133 | pg/g | | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.46 | 0.46 | 0.46 | pg/g | J | U | B, result changed from 0.458 and EDL from 0.267 |
| OCDD | 3268879 | 55.6 | 4.6 | 0.647 | pg/g | | | |

*Analysis Method 1613B*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| OCDF | 39001020 | 4.6 | 4.6 | 4.6 | pg/g | J | U | B, result changed from 1.54 and EDL from 0.616 |
| Total HpCDD | 37871004 | 13.5 | 2.3 | 0.346 | pg/g | | J | B |
| Total HpCDF | 38998753 | 1.76 | 2.3 | 0.172 | pg/g | J | J | B, *III |
| Total HxCDD | 34465468 | 1.58 | 2.3 | 0.234 | pg/g | J | J | B |
| Total HxCDF | 55684941 | 1.79 | 2.3 | 0.131 | pg/g | J | J | B, *III |
| Total PeCDD | 36088229 | 0.186 | 2.3 | 0.156 | pg/g | J | J | B |
| Total PeCDF | 30402154 | 2.31 | 2.3 | 0.0791 | pg/g | | J | B |
| Total TCDD | 41903575 | 0.18 | 0.46 | 0.147 | pg/g | J | J | |
| Total TCDFs | 55722275 | 1.87 | 0.46 | 0.267 | pg/g | | J | B |

## *Analysis Method 1613B*

**Sample Name** HZET0105S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 1081002 **Sample** 9/29/2009 1:35:00 PM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 2.12 | 2.12 | 2.12 | pg/g | J | U | B, result changed from 0.64 and EDL from 0.358 |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.214 | 2.12 | 0.214 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.338 | 2.12 | 0.338 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.246 | 2.12 | 0.246 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.18 | 2.12 | 0.18 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.277 | 2.12 | 0.277 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.175 | 2.12 | 0.175 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 2.12 | 2.12 | 2.12 | pg/g | JK | UJ | *III, result changed from 0.328 and EDL from 0.273 |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.256 | 2.12 | 0.256 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.159 | 2.12 | 0.159 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.14 | 2.12 | 0.14 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.18 | 2.12 | 0.18 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.141 | 2.12 | 0.141 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.127 | 0.424 | 0.127 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.275 | 0.424 | 0.151 | pg/g | JK | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.426 | 0.426 | 0.426 | pg/g | | U | B, RL changed from 0.424 and EDL from 0.177 |
| OCDD | 3268879 | 7.02 | 7.02 | 7.02 | pg/g | | U | B, RL changed from 4.24 and EDL from 0.596 |
| OCDF | 39001020 | 0.569 | 4.24 | 0.569 | pg/g | U | U | |
| Total HpCDD | 37871004 | 1.71 | 2.12 | 0.358 | pg/g | J | J | B |
| Total HpCDF | 38998753 | 0.214 | 2.12 | 0.214 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.328 | 2.12 | 0.246 | pg/g | J | J | B, *III |
| Total HxCDF | 55684941 | 0.175 | 2.12 | 0.175 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.159 | 2.12 | 0.159 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.131 | 2.12 | 0.0752 | pg/g | J | J | B |
| Total TCDD | 41903575 | 0.144 | 0.424 | 0.127 | pg/g | J | J | |

*Analysis Method 1613B*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total TCDFs | 55722275 | 0.956 | 0.424 | 0.151 | pg/g | J | B, *III |

## *Analysis Method 1613B*

**Sample Name** HZET0808S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 1081003 **Sample** 9/29/2009 8:00:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 2.04 | 2.04 | 2.04 pg/g | | J | U | B, result changed from 1.3 and EDL from 0.248 |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 2.04 | 2.04 | 2.04 pg/g | | JK | UJ | *III, result changed from 0.247 and EDL from 0.129 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.247 | 2.04 | 0.247 pg/g | | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.158 | 2.04 | 0.158 pg/g | | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.147 | 2.04 | 0.102 pg/g | | J | J | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.181 | 2.04 | 0.181 pg/g | | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.104 | 2.04 | 0.104 pg/g | | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.178 | 2.04 | 0.178 pg/g | | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.151 | 2.04 | 0.151 pg/g | | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.106 | 2.04 | 0.106 pg/g | | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 2.04 | 2.04 | 2.04 pg/g | | J | U | B, result changed from 0.175 and EDL from 0.134 |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.11 | 2.04 | 0.11 pg/g | | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.142 | 2.04 | 0.142 pg/g | | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.0971 | 0.408 | 0.0971 pg/g | | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.274 | 0.408 | 0.145 pg/g | | JK | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.408 | 0.408 | 0.408 pg/g | | J | U | B, result changed from 0.257 and EDL from 0.172 |
| OCDD | 3268879 | 15.1 | 4.08 | 0.868 pg/g | | | | |
| OCDF | 39001020 | 4.08 | 4.08 | 4.08 pg/g | | J | U | B, result changed from 0.936 and EDL from 0.591 |
| Total HpCDD | 37871004 | 3.56 | 2.04 | 0.248 pg/g | | | J | B |
| Total HpCDF | 38998753 | 0.582 | 2.04 | 0.129 pg/g | | J | J | B, *III |
| Total HxCDD | 34465468 | 0.158 | 2.04 | 0.158 pg/g | | U | U | |
| Total HxCDF | 55684941 | 0.724 | 2.04 | 0.102 pg/g | | J | J | B |
| Total PeCDD | 36088229 | 0.106 | 2.04 | 0.106 pg/g | | U | U | |

## *Analysis Method 1613B*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Total PeCDF | 30402154 | 1.1 | 2.04 | 0.0544 | pg/g | J | J | B |
| Total TCDD | 41903575 | 0.0971 | 0.408 | 0.0971 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.681 | 0.408 | 0.172 | pg/g | | J | B, *III |

## *Analysis Method 6010B*

**Sample Name** HZET0508S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077012 **Sample** 9/29/2009 9:00:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Silver | 7440224 | 0.105 | 0.523 | 0.105 | mg/kg | U | U | |

## *Analysis Method 6020*

**Sample Name** HZET0104S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077001 **Sample** 9/29/2009 1:20:00 PM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Cadmium | 7440439 | 0.292 | 0.221 | 0.0221 | mg/kg | | | |
| Lead | 7439921 | 6.43 | 0.441 | 0.11 | mg/kg | | | |
| Zinc | 7440666 | 52.3 | 2.21 | 0.441 | mg/kg | | | |

**Sample Name** HZET0105S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077002 **Sample** 9/29/2009 1:35:00 PM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Cadmium | 7440439 | 0.0723 | 0.203 | 0.0203 | mg/kg | J | J | |
| Lead | 7439921 | 5.41 | 0.406 | 0.102 | mg/kg | | | |
| Zinc | 7440666 | 45 | 2.03 | 0.406 | mg/kg | | | |

**Sample Name** HZET0230S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077003 **Sample** 9/29/2009 10:25:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 4.7 | 0.401 | 0.1 | mg/kg | | | |

**Sample Name** HZET0231S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077004 **Sample** 9/29/2009 10:15:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 5.76 | 0.395 | 0.0988 | mg/kg | | | |

**Sample Name** HZET0232S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077005 **Sample** 9/29/2009 10:05:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 17.9 | 0.404 | 0.101 | mg/kg | | | |

**Sample Name** HZET0233S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077006 **Sample** 9/29/2009 11:10:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 7.92 | 0.402 | 0.101 | mg/kg | | | |

## *Analysis Method 6020*

**Sample Name** HZET0234S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077007 **Sample** 9/29/2009 11:20:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 22.9 | 0.402 | 0.101 | mg/kg | | | |

**Sample Name** HZET0235S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077008 **Sample** 9/29/2009 11:00:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 4.32 | 0.405 | 0.101 | mg/kg | | | |

**Sample Name** HZET0236S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077009 **Sample** 9/29/2009 11:30:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 7.18 | 0.396 | 0.0991 | mg/kg | | | |

**Sample Name** HZET0304S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077010 **Sample** 9/29/2009 8:45:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 11.4 | 0.993 | 0.328 | mg/kg | | | |
| Lead | 7439921 | 7.35 | 0.397 | 0.0993 | mg/kg | | | |

**Sample Name** HZET0305S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077011 **Sample** 9/29/2009 8:30:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 14.3 | 1.09 | 0.359 | mg/kg | | | |
| Lead | 7439921 | 8.31 | 0.435 | 0.109 | mg/kg | | | |

**Sample Name** HZET0508S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077012 **Sample** 9/29/2009 9:00:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.9 | 1.06 | 0.211 | mg/kg | | | |
| Cadmium | 7440439 | 0.0851 | 0.211 | 0.0211 | mg/kg | J | J | |
| Chromium | 7440473 | 22.4 | 3.17 | 1.06 | mg/kg | N | J | Q |
| Copper | 7440508 | 11.6 | 1.06 | 0.348 | mg/kg | | | |
| Nickel | 7440020 | 13 | 2.11 | 0.528 | mg/kg | | | |

## *Analysis Method 7471A*

**Sample Name** HZET0508S001 **Matrix Type:** Soil **Result Type:** Primary

**Lab Sample Name:** 238077012 **Sample** 9/29/2009 9:00:00 AM **Validation** V

| Analyte | CAS No | Result Value | RL | MDL | Result | Lab Qualifier | Validation | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0109 | 0.0121 | 0.0041 mg/kg | | J | J | B, *III |

Table of Contents

# Case Narrative

**Case Narrative**
**for**
**Boeing - SSFL (MWH)**
**Work Order: 238077**
**SDG: 238077**

**October 12, 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 September 30, 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:

| Laboratory Identification | Sample Description |
|---|---|
| 238077001 | HZET0104S001 |
| 238077002 | HZET0105S001 |
| 238077003 | HZET0230S001 |
| 238077004 | HZET0231S001 |
| 238077005 | HZET0232S001 |
| 238077006 | HZET0233S001 |
| 238077007 | HZET0234S001 |
| 238077008 | HZET0235S001 |
| 238077009 | HZET0236S001 |
| 238077010 | HZET0304S001 |
| 238077011 | HZET0305S001 |
| 238077012 | HZET0508S001 |
| 238077013 | HZET0808S001 |

**Items of Note**

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

**Case Narrative**

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

**Data Package:**

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

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

Jacqueline Trudell

Project Manager

# Data Qualifiers Definitions

## Data Review Qualifier Definitions

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

# Laboratory Certifications

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

| State | Certification |
|---|---|
| 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 |

# Chain of Custody and Supporting Documentation

# CHAIN OF CUSTODY RECORD

COC #: 238180 MWHAG20090930_00



| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | A. Goldenberg | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| Address: | 2121 N. California Blvd | Project Manager: | Alex Fischl | | | | |
| | Suite 600 | PM Phone #: | (925) 627-4627 | | | | |
| | Walnut Creek | Field Contact: | Benjamin Stewart | | | | |
| | CA | Field Contact #: | (818) 266-1378 | | | | |
| | 94596 | Lab Name: | GEL Laboratories, LLC | | | | |
| Email: | sarah.vonraesfeld@mwhglobal.c | Lab Contact: | Jackie Trudell | | | | |
| | sean.leffler@mwhglobal.com | Lab Address: | 2040 Savage Road | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Dioxin by 1613B - Water | Metals 6020 Soil Copper | Metals by 6010/6020/7470A - Water | Metals by 6010/6020/7471A - Soil | PCB by SW8082 - Soil | PCB by SW8082 - Water | Perchlorate 314 Soil DI-WET | SVOCs by SW8270C SIM - Soil | SVOCs by SW8270C SIM - Water | TPH by SW8015BM - Soil | TPH by SW8015BM - Water | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EBQW2248 | Water | 9/30/2009 | 14:45 | 9 | | | 10 | | 10 | | | 10 | | | 10 | | 10 | | | |
| HZBS0081AS001 | Soil | 9/30/2009 | 9:35 | 3 | 5 | | | | | 2 | 5 | | 5 | 5 | | 5 | | | | |
| HZBS0081AS002 | Soil | 9/30/2009 | 10:12 | 3 | 5 | | | | | 2 | 5 | | 5 | 5 | | 5 | | | | |
| HZBS0178S001 | Soil | 9/30/2009 | 11:15 | 3 | 5 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | |
| HZBS0178S002 | Soil | 9/30/2009 | 11:30 | 3 | 5 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | |
| HZBS0179S001 | Soil | 9/30/2009 | 12:40 | 3 | 5 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | |
| HZBS0179S002 | Soil | 9/30/2009 | 12:50 | 3 | 5 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | |
| HZET0718S001 | Soil | 9/30/2009 | 13:15 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0719S001 | Soil | 9/30/2009 | 13:35 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0720S001 | Soil | 9/30/2009 | 13:55 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |

**Requested Analyses**

**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 bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| Allan M. R... | 9-30-09 | | 10/1/09 | | | | |
| Company: MWH | Time: 16:51 | Company: GEL | Time: 0835 | Company: | Time: | Company: | Time: |

**Comments:** Sample volume for dioxin analysis shipped directly to CFA, sample volume for metals analysis shipped to GEL

Geotracker EDF ☐

Data Validation Package ☑ Level IV

5

# CHAIN OF CUSTODY RECORD

COC #: 238180

MWHAG20090930_00



| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | A. Goldenberg | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| Address: | 2121 N. California Blvd | Project Manager: | Alex Fischl | | | | |
| | Suite 600 | PM Phone #: | (925) 627-4627 | | | | |
| | Walnut Creek | Field Contact: | Benjamin Stewart | | | | |
| | CA | Field Contact #: | (818) 266-1378 | | | | |
| | 94596 | Lab Name: | GEL Laboratories, LLC | | | | |
| Email: | sarah.vonraesfeld@mwhglobal.c | Lab Contact: | Jackie Trudell | | | | |
| | sean.leffler@mwhglobal.com | Lab Address: | 2040 Savage Road | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Dioxin by 1613B - Water | Metals 6020 Soil Copper | Metals by 6010/6020/7470A - Water | Metals by 6010/6020/7471A - Soil | PCB by SW8082 - Soil | PCB by SW8082 - Water | Perchlorate 314 Soil DI-WET | SVOCs by SW8270C SIM - Soil | SVOCs by SW8270C SIM - Water | TPH by SW8015BM - Soil | TPH by SW8015BM - Water | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HZET0721S001 | Soil | 9/30/2009 | 14:05 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0722S001 | Soil | 9/30/2009 | 14:16 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0723S001 | Soil | 9/30/2009 | 14:25 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0724S001 | Soil | 9/30/2009 | 13:30 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0725S001 | Soil | 9/30/2009 | 13:25 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |

Requested Analyses

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 bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| Allan M. Pate | 9-30-09 | | 10/1/09 | | | | |
| Company: MWH | Time: 16:51 | Company: GEL | Time: 0835 | Company: | Time: | Company: | Time: |

**Comments:** Sample volume for dioxin analysis shipped directly to CFA, sample volume for metals analysis shipped to GEL

Geotracker EDF ☐

Data Validation Package ☑ Level IV

6

GEL Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| **Client:** SSFL | **SDG/ARCOC/Work Order:** 238180 |
| **Received By:** SL | **Date Received:** 10/1/09 |

| **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? | | ✓ | Maximum Counts Observed*: 80 cpm |
| Classified Radioactive II or III by RSO? | | ✓ | |
| COC/Samples marked containing PCBs? | | ✓ | |
| Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#: |
| Samples identified as Foreign Soil? | | ✓ | |

| | Sample Receipt Criteria | Yes | NA | No | Comments/Qualifiers (Required for Non-Conforming Items) |
|---|---|---|---|---|---|
| 1 | Shipping containers received intact and sealed? | ✓ | | | Circle Applicable: seals broken damaged container leaking container other (describe) |
| 2 | Samples requiring cold preservation within (0 ≤ 6 deg. C)? | ✓ | | | Preservation Method: ice bags blue ice dry ice none other (describe) 2,4° |
| 3 | Chain of custody documents included with shipment? | ✓ | | | |
| 4 | Sample containers intact and sealed? | | | ✓ | Circle Applicable: seals broken damaged container leaking container other (describe) 3 Amber 1L bottles of EBQW2248 arrived broken. |
| 5 | Samples requiring chemical preservation at proper pH? | ✓ | | | Sample ID's, containers affected and observed pH: If Preservation added, Lot#: |
| 6 | VOA vials free of headspace (defined as < 6mm bubble)? | | | ✓ | Sample ID's and containers affected: |
| 7 | Are Encore containers present? | | | ✓ | (If yes, immediately deliver to Volatiles laboratory) |
| 8 | Samples received within holding time? | ✓ | | | Id's and tests affected: |
| 9 | Sample ID's on COC match ID's on bottles? | ✓ | | | Sample ID's and containers affected: |
| 10 | Date & time on COC match date & time on bottles? | ✓ | | | Sample ID's affected: |
| 11 | Number of containers received match number indicated on COC? | | | ✓ | Sample ID's affected: Received only 2 containers of HZBS01785001/2 and HZBS01795001/2 and only 1 container of HZET0718-0725. |
| 12 | COC form is properly signed in relinquished/received sections? | ✓ | | | |

Comments:
9457 3163 0810 40
9457 3163 0832 20

PM (or PMA) review: Initials JT Date 10/1/09

**Subject:** RE: ISRA Sample Receipt Issues - 10/1/09
**From:** Sarah Von Raesfeld <Sarah.E.VonRaesfeld@us.mwhglobal.com>
**Date:** Thu, 1 Oct 2009 10:13:45 -0600
**To:** Jackie Trudell <jacqueline.trudell@gel.com>, Sean Leffler <Sean.S.Leffler@us.mwhglobal.com>
**CC:** Allison Ruotolo <Allison.M.Ruotolo@us.mwhglobal.com>

Hi Jackie,

Please send volume to CFA for the dioxin analysis and hopefully we will not need to re-run any of the other organic analyses.

-----Original Message-----
From: Jackie Trudell [mailto:jacqueline.trudell@gel.com]
Sent: Thursday, October 01, 2009 8:12 AM
To: Sarah Von Raesfeld; Sean Leffler
Subject: ISRA Sample Receipt Issues - 10/1/09

Sarah and Sean-
We received 3 broken 1L glass amber containers today for sample EBQW2248. With the 5 remaining 1L containers, we will be able to preform the requested analyses as long as no re-extractions are required. Please also note, that no liquid volume was sent from the field to CFA for Dioxin analysis.

Thanks,
Jackie

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

**Date: 10/27/09**

**Requesting Firm: MWH**
**Address: 9444 Farnham Suite 300**
**San Diego, CA 92123**
**Phone: 858-751-1217**
**Fax: 858-751-1201**
**E-mail: Sean.leffler@mwhglobal.com**

**To:** Jackie Trudell **Phone: 843-769-7388**

**Laboratory** GEL Laboratories, LLC **E-mail:** **jacqueline.trudell@gel.com**

**From:** Sean Leffler

**Requestor signature:**

**Subject:** **Chain-of-Custody Form Analytical Request Change** **No. of Pages: 3**

**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 |
|---|---|---|---|---|
| MWHBM20 091001_00 | HZBS0081AS001, HZBS0081AS002 | 9/30/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0178S001, HZBS0178S002 | 9/30/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0179S001, HZBS0179S002 | 9/30/09 | | Run perchlorate by 6850 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

The reason for these changes:

| | |
|---|---|
| *Incorrectly marked on COC form* | |
| *Lack of sample volume* | |
| *Change in analytical request* | *X* |
| *Other:* | |

Thank you

# CHAIN OF CUSTODY RECORD

COC #: MWHAG20090930_00

238180

Page: 1 of 2

| Customer Information | | Project Information | |
|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 |
| Address: | 2121 N. California Blvd | Project Manager: | Alex Fischl |
| | Suite 600 | PM Phone #: | (925) 627-4627 |
| | Walnut Creek | Field Contact: | Benjamin Stewart |
| | CA | Field Contact #: | (818) 266-1378 |
| | 94596 | Lab Name: | GEL Laboratories, LLC |
| Email: | sarah.vonraesfeld@mwhglobal.c | Lab Contact: | Jackie Trudell |
| | sean.teffler@mwhglobal.com | Lab Address: | 2040 Savage Road |
| | | | Charleston, SC 29407 |
| | | Lab Phone: | (843) 769-7388 |

| Project Information | | | |
|---|---|---|---|
| Collector: | A. Goldenberg | Boeing PM: | |
| Contact #: | | | |

| Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Dioxin by 1613B - Water | Metals 6020 Soil Copper | Metals by 6010B/6020/7470A - Water | Metals by 6010B/6020/7471A - Soil | PCB by SW8082 - Soil | PCB by SW8082 - Water | Perchlorate 314 Soil DI-WET | SVOCs by SW8270C SIM - Soil | SVOCs by SW8270C SIM - Water | TPH by SW8015BM - Soil | TPH by SW8015BM - Water | Perchlorate 6850 Soil | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EBQW2248 | Water | 9/30/2009 | 14:45 | 9 | | | 10 | | 10 | | | 10 | | | 10 | | 10 | | | |
| HZBS0081AS001 | Soil | 9/30/2009 | 9:35 | 3 | 5 | | | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | |
| HZBS0081AS002 | Soil | 9/30/2009 | 10:12 | 3 | 5 | 5 (1) | | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | |
| HZBS0178S001 | Soil | 9/30/2009 | 11:15 | 3 | 5 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | |
| HZBS0178S002 | Soil | 9/30/2009 | 11:30 | 3 | 5 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | |
| HZBS0179S001 | Soil | 9/30/2009 | 12:40 | 3 | 5 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | |
| HZBS0179S002 | Soil | 9/30/2009 | 12:50 | 3 | 5 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | |
| HZET0718S001 | Soil | 9/30/2009 | 13:15 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0719S001 | Soil | 9/30/2009 | 13:35 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0720S001 | Soil | 9/30/2009 | 13:55 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |

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 bellow are Turn Around Times.

(2)

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| Allen M. Ruston | 9-30-09 | | 10/1/09 | | | | |
| Company: MWH | Time: 16:51 | Company: GEL | Time: 0835 | Company: | Time: | Company: | Time: |

Comments: Sample volume for dioxin analysis shipped directly to CFA, sample volume for metals analysis shipped to GEL

Geotracker EDF ☐

Data Validation Package ☑ Level IV

(1) SSL 10/8/09 (2) SSL 10/27/09

10

# CHAIN OF CUSTODY RECORD

COC #: 238180

MWHAG20090930_00

Page: 2 of 2

| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | A. Goldenberg | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| Address: | 2121 N. California Blvd | Project Manager: | Alex Fischl | | | | |
| | Suite 600 | PM Phone #: | (925) 627-4627 | | | | |
| | Walnut Creek | Field Contact: | Benjamin Stewart | | | | |
| | CA | Field Contact #: | (818) 266-1378 | | | | |
| | 94596 | Lab Name: | GEL Laboratories, LLC | | | | |
| Email: | sarah.vonraesfeld@mwhglobal.c | Lab Contact: | Jackie Trudell | | | | |
| | sean.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: D2216 Moisture Soil | Dioxin by 1613B - Soil | Dioxin by 1613B - Water | Metals 6020 Soil Copper | Metals by 6010/6020/7470A - Water | Metals by 6010/6020/7471A - Soil | PCB by SW8082 - Soil | PCB by SW8082 - Water | Perchlorate 314 Soil DI-WET | SVOCs by SW8270C SIM - Soil | SVOCs by SW8270C SIM - Water | TPH by SW8015BM - Soil | TPH by SW8015BM - Water | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HZET0721S001 | Soil | 9/30/2009 | 14:05 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0722S001 | Soil | 9/30/2009 | 14:16 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0723S001 | Soil | 9/30/2009 | 14:25 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0724S001 | Soil | 9/30/2009 | 13:30 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |
| HZET0725S001 | Soil | 9/30/2009 | 13:25 | 2 | 5 | 5 | | 2 | | | | | | | | | | | | |

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 bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| Allen M. Ford | 9-30-09 | | 10/1/09 | | | | |
| Company: MWH | Time: 16:51 | Company: GEL | Time: 0835 | Company: | Time: | Company: | Time: |

Comments: Sample volume for dioxin analysis shipped directly to CFA, sample volume for metals analysis shipped to GEL.

Geotracker EDF ☐

Data Validation Package ☑ Level IV

11

# LABORATORY TASK ORDER (LTO) FORM

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

**Event Name:** ISRA Sampling, August 2009 **Start:** 8/24/2009 **End:** 9/30/2009

**LTO DATE:** **LTO NUMBER:**

| | | | |
|---|---|---|---|
| **Consultant Name:** | MWH | **Contract Laboratory:** | GEL |
| Address: | 2121 N. California Blvd. Ste. 600<br>Walnut Creek, CA 94596 | Address: | 2040 Savage Rd.<br>Charleston, SC 29407 |
| **Contact Name:** | Sarah Von Raesfeld | **Lab Contact Name:** | Jackie Trudell |
| Phone Number: | 925-627-4654 | Phone Number: | 843-769-7388 |
| Fax Number: | 925-627-4501 | Fax Number: | 843-766-1178 |
| E-mail Address: | Sarah.VonRaesfeld@mwhglobal.com | E-mail Address: | jacqueline.trudell@gel.com |

## SAMPLE CONTAINER ORDER FORM

**Date Required:**

**Date Sample Pickup:**

**Ship Containers To:**

Project Site _____ *(enter "X")*
Consultant Office _____ *(enter "X")*
Other Location (specify in comments) _____ *(enter "X")*

**Container Information:**

Trip Blank (VOA only) No *(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 X *(select all applicable)*
Water X *(select all applicable)*
Vapor _____ *(select all applicable)*

Est. Total # of Samples: 175 Est. Total # of EDDs 40

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

| | Water | Soil | Contingent |
|---|---|---|---|
| **Dioxins (1613B)** | **15** | **124** | **0** |
| EPA 8015M (DRO) | -- | -- | -- |
| EPA 8015M (JET FUEL) | -- | -- | -- |
| EPA 8015M (CC) | -- | -- | -- |
| **TCE (8260B)** | **5** | **12** | **0** |
| EPA 8270C SIM (SVOC) | -- | -- | -- |
| EPA 8310 (PAH) | -- | -- | -- |
| **EPA 8082 (PCB)** | **3** | **5** | **0** |
| **Nickel (6020)** | **5** | **10** | **0** |
| **Chromium (6020)** | **5** | **10** | **0** |
| **Silver (6020)** | **5** | **10** | **0** |
| **Cadmium (6020)** | **10** | **35** | **0** |
| **Arsenic (6020)** | **5** | **10** | **0** |
| **% Moisture (D2216)** | **0** | **170** | **0** |
| **Lead (6020)** | **10** | **65** | **0** |
| **Copper (6020)** | **10** | **75** | **0** |
| **Zinc (6020)** | **5** | **20** | **0** |
| **Mercury by 7471A/7470A** | **5** | **25** | **0** |

## LABORATORY REPORTING REQUIREMENTS

**Project TAT:**

Normal: X (10 Business days)
RUSH: 5 (Specify- 24 / 48 / 72HRS)
Other : _____ (Specify # of Days)
Report Due Date:

**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)

**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

Send Original Reports To:

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

## SPECIAL INSTRUCTIONS/LTO NOTES

## CONFIRMATION OF TRANSMITTAL & RECEIPT

**LTO Sent By:**

Name: Sarah Von Raesfeld
Date: 09/02/09

**LTO Received By-**

Name:
Date:

Table of Contents

# Case Narrative

**Case Narrative**
**for**
**Boeing - SSFL (MWH)**
**Work Order: 238180**
**SDG: 238180**

**October 27, 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 October 01, 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:

| Laboratory Identification | Sample Description |
|---|---|
| 238180001 | EBQW2248 |
| 238180002 | HZBS0081AS001 |
| 238180003 | HZBS0081AS002 |
| 238180004 | HZBS0178S001 |
| 238180005 | HZBS0178S002 |
| 238180006 | HZBS0179S001 |
| 238180007 | HZBS0179S002 |
| 238180008 | HZET0718S001 |
| 238180009 | HZET0719S001 |
| 238180010 | HZET0720S001 |
| 238180011 | HZET0721S001 |
| 238180012 | HZET0722S001 |
| 238180013 | HZET0723S001 |
| 238180014 | HZET0724S001 |
| 238180015 | HZET0725S001 |

**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, General Chemistry, Metals, Perchlorates by LCMSMS, Percent Moisture and Dioxins (Cape Fear Analytical).

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

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 27 October 2009**

| State | Certification |
|---|---|
| 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: 238180

Prepared by

MEC$^X$, 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: | 238180 |
| Project Manager: | Dixie Hambrick |
| Matrix: | water/soil |
| QC Level: | V |
| No. of Samples: | 15 |
| No. of Reanalyses/Dilutions: | 0 |
| Laboratory: | GEL |

**Table 1. Sample Identification**

| *Sample Name* | *Lab Sample Name* | *Sub-Lab Sample Name* | *Matrix* | *Collection* | *Method* |
|---|---|---|---|---|---|
| EBQW2248 | 238180001 | 1089001 | Water | 9/30/09 2:45:00 PM | 1613B, 6010B, 6020, 7470A, 8015B, 8082, 8270C |
| HZBS0081AS001 | 238180002 | N/A | Soil | 9/30/2009 9:35:00 AM | 314.0-DI WET, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0081AS002 | 238180003 | N/A | Soil | 9/30/2009 10:12:00 AM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0178S001 | 238180004 | 1084001 | Soil | 9/30/2009 11:15:00 AM | 1613B, 314.0-DI WET, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0178S002 | 238180005 | 1084002 | Soil | 9/30/2009 11:30:00 AM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0179S001 | 238180006 | 1084003 | Soil | 9/30/2009 12:40:00 PM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0179S002 | 238180007 | 1084004 | Soil | 9/30/2009 12:50:00 PM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZET0718S001 | 238180008 | 1084005 | Soil | 9/30/2009 1:15:00 PM | 1613B, 6020 |
| HZET0719S001 | 238180009 | 1084006 | Soil | 9/30/2009 1:35:00 PM | 1613B, 6020 |
| HZET0720S001 | 238180010 | 1084007 | Soil | 9/30/2009 1:55:00 PM | 1613B, 6020 |
| HZET0721S001 | 238180011 | 1084008 | Soil | 9/30/2009 2:05:00 PM | 1613B, 6020 |

| | | | | | |
|---|---|---|---|---|---|
| HZET0722S001 | 238180012 | 1084009 | Soil | 9/30/2009 2:16:00 PM | 1613B, 6020 |
| HZET0723S001 | 238180013 | 1084010 | Soil | 9/30/2009 2:25:00 PM | 1613B, 6020 |
| HZET0724S001 | 238180014 | 1084011 | Soil | 9/30/2009 1:30:00 PM | 1613B, 6020 |
| HZET0725S001 | 238180015 | 1084012 | Soil | 9/30/2009 1:25:00 PM | 1613B, 6020 |

## II. Sample Management

No anomalies were observed regarding sample management. One cooler was received as Cape Fear above the temperature limit at 7°C; however, due to the nonvolatile nature of the analytes, no qualifications were required. The remaining samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.

## Data Qualifier Reference Table

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

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

## Qualification Code Reference Table

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

## Qualification Code Reference Table Cont.

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

# III. Method Analyses

## A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

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

- Holding Times: Extraction and analytical holding times were met. The sample was extracted and analyzed within one year of collection.

- Instrument Performance: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: The aqueous method blank had detects below the PQL for 12 target compounds; however, there were no target compounds detected above the EDL in the associated sample. The soil method blank had detects below the PQL for all but five of the target compounds. Detects less than the reporting limit or less than 5× the method blank detect for 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDF, and OCDD were qualified as nondetected, "U," at the EDL or the level of contamination. Detected results for all totals except total TCDD were qualified as estimated, "J," due to detects in the soil method blank.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613. The RPDs were within the laboratory-established control limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZBS0178S001. Recoveries were within the acceptance criteria listed in Table 6 of Method 1613. The RPDs were within the laboratory-established control limits.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank associated with the samples in this SDG; however, the sample was not analyzed for dioxins. EBQW2248 was identified as the equipment rinsate associated with the samples in this SDG. There were no detects above the EDL in this sample.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.

- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The laboratory performed confirmation analyses for 2,3,7,8-TCDF. When the original result was reported as an estimated maximum possible concentration (EMPC), the original result was rejected, "R," in favor the confirmation result. When the original result was not reported as an EMPC, or if both the original analysis and the confirmation analysis were both reported as EMPCs, the confirmation result was rejected, "R," in favor of the initial result.

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. (EMPCs) were identified in the sample of this SDG, as denoted by the laboratory "K," code. For individual isomers identified as EMPCs, the results were qualified as estimated nondetects, "UJ." Totals reported as EMPCs were qualified as estimated, "J," as only a portion of the total was identified as an EMPC. The laboratory calculated and reported compound-specific detection limits. Any detect below the laboratory lower calibration level was qualified as estimated, "J." Nondetects are valid to the estimated detection limit (EDL).

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

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

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

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.

- Tuning: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: Arsenic and copper were detected in the aqueous method blank at 1.67 and 0.485 µg/L, respectively and thallium was detected in a bracketing CCB at 0.343 µg/L; therefore, copper, arsenic, and thallium detected in EBQW2248 were qualified as nondetected, "U," at the reporting limit. Mercury was reported in a bracketing CCB at -0.098 µg/L; therefore,

mercury in the soil samples was qualified as estimated, "J," for detects and, "UJ," for nondetects. Method blanks and CCBs had no other applicable detects.

- Interference Check Samples: Review is not applicable at a Level V validation; however, the reviewer noted that antimony and boron were detected in the ICSA at 16.7 and 18.0 µg/L, respectively. Antimony and boron detected in the soil samples were qualified as estimated, "J."

- Blank Spikes and Laboratory Control Samples: Mercury was recovered above the control limit in the aqueous LCS; however, mercury was not detected in the associated sample. All remaining recoveries and all aqueous RPDs were within laboratory-established QC limits.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on HZBS0081AS001. The RPDs for arsenic, barium, beryllium, chromium, copper, lead, nickel, vanadium, and zinc exceeded the control limit; therefore, detects for these analytes were qualified as estimated, "J," in the soil samples.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZBS0081AS001. All recoveries for copper, lead, and nickel and the cobalt and beryllium MSD recoveries were below the control limit. The cobalt and mercury MS recoveries were above the control limit. Detects for these analytes were qualified as estimated, "J," in the soil samples. RPDs for cobalt and mercury exceeded the control limits; therefore, the results for cobalt and mercury were qualified as estimated, "J," for detects and, "UJ," for nondetects in the soil samples. All remaining recoveries and RPDs were within laboratory-established QC limits.

- Serial Dilution: Serial dilution analyses were performed on EBQW2248 with acceptable results. Serial dilution analyses were also performed on HZBS0081AS001. The %Ds for chromium, cobalt, copper, and nickel exceeded the control limit; therefore, detects for these analytes were qualified as estimated, "J," in the soil samples.

- 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. Vanadium in the soil samples was analyzed at a 10× dilution in order to report the analyte within the linear range of the instrument. All remaining soil ICP-MS analytes were reported from the laboratory's standard 2× dilution for soils. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2248 was the equipment rinsate associated with the samples in this SDG. There were no detects in either sample.

- 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: November 2, 2009

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

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.

- GC/MS Tuning: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: Bis(2-ethylhexyl)phthalate was detected in the aqueous method blank at 0.161 µg/L; therefore, bis(2-ethylhexyl)phthalate detected in EBQW2248 was qualified as nondetected, "U," at the reporting limit. The method blanks had no other target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Recoveries and the aqueous RPDs were within laboratory-established QC limits.

- Surrogate Recovery: Recoveries were within laboratory-established QC limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZBS0081AS001. Recoveries and the aqueous RPDs were within laboratory-established QC limits.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2248 was the equipment rinsate associated with the samples in this SDG. There were no reportable detects in either 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 PAH compounds and added phthalates by Method 8270C low-level.

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

- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.

- System performance: System performance is not evaluated at a Level V validation.

## D. EPA METHODS 314.0 and 6850—Perchlorate

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC$^X$ Data Validation Procedure for Metals (DVP-20, Rev. 0), EPA Methods 314.0 and 6850*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: The analytical holding time, 28 days, was met.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: Method blanks and CCBs had no detects.

- Blank Spikes and Laboratory Control Samples: The recoveries were within the 6850 and 314.0 method-established QC limits of 80-120% and 85-115%, respectively. The recovery for the 6850 LCS was within the laboratory-established control limit.

- Laboratory Duplicates: A laboratory duplicate analysis was performed on HZBS0179S002 for perchlorate by 314.0. The RPD was within the method-established control limit of ≤15%.

- Matrix Spike/Matrix Spike Duplicate: A matrix spike analysis was performed on HZBS0178S001 for perchlorate analyzed by 314.0, the recovery was within the method-established control limit of 80-120%. MS/MSD analyses were performed on

HZBS0179S002 for perchlorate analyzed by 6850. Recoveries and RPDs were within method-established QC limits of 80-120% and ≤20%, respectively.

- Sample Result Verification: The sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. Reported nondetects are valid to the reporting limit.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2248 was the equipment rinsate associated with the samples in this SDG. Perchlorate was not detected in either sample.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

## E. EPA METHOD 8082—PCBs

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

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

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: The method blanks had no target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: 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 HZBS0081AS001. The 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: FBQW2239 (235913) was the field blank and EBQW2248 was the equipment rinsate associated with the samples in this SDG. There were no detects above the MDL in either sample.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for Aroclors by Method 8082. Although not generally reviewed at Level V validation, the laboratory flagged Aroclor-1254 in HZBS0081AS001 and HZBS0178S001 as having intercolumn %Ds greater than 40%. Both results were qualified as estimated, "J."

- 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.

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

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

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

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: Method blanks had no target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Recoveries and the aqueous RPD 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 HZBS0081AS001. Recoveries and the RPD were within laboratory-established QC limits.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2248 was the equipment rinsate associated with the samples in this SDG. FBQW2239 was not analyzed by 8015 and there were no detects above the MDL in EBQW2248.

    - 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: 238180

## *Analysis Method 1613B*

**Sample Name** EBQW2248 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 1089001 **Sample Date:** 9/30/2009 2:45:00 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 | 4.91 | 23.8 | 4.91 | pg/L | U | U | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 2.51 | 23.8 | 2.51 | pg/L | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 4.89 | 23.8 | 4.89 | pg/L | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 2.23 | 23.8 | 2.23 | pg/L | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 1.66 | 23.8 | 1.66 | pg/L | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 2.38 | 23.8 | 2.38 | pg/L | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 1.56 | 23.8 | 1.56 | pg/L | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 2.42 | 23.8 | 2.42 | pg/L | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 2.89 | 23.8 | 2.89 | pg/L | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 1.6 | 23.8 | 1.6 | pg/L | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 1.23 | 23.8 | 1.23 | pg/L | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 1.7 | 23.8 | 1.7 | pg/L | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 1.24 | 23.8 | 1.24 | pg/L | U | U | |
| 2,3,7,8-TCDD | 1746016 | 1.83 | 4.76 | 1.83 | pg/L | U | U | |
| 2,3,7,8-TCDF | 51207319 | 1.89 | 4.76 | 1.89 | pg/L | U | U | |
| OCDD | 3268879 | 11 | 47.6 | 11 | pg/L | U | U | |
| OCDF | 39001020 | 10.7 | 47.6 | 10.7 | pg/L | U | U | |
| Total HpCDD | 37871004 | 4.91 | 23.8 | 4.91 | pg/L | U | U | |
| Total HpCDF | 38998753 | 2.51 | 23.8 | 2.51 | pg/L | U | U | |
| Total HxCDD | 34465468 | 2.23 | 23.8 | 2.23 | pg/L | U | U | |
| Total HxCDF | 55684941 | 1.56 | 23.8 | 1.56 | pg/L | U | U | |
| Total PeCDD | 36088229 | 1.6 | 23.8 | 1.6 | pg/L | U | U | |
| Total PeCDF | 30402154 | 1.23 | 23.8 | 1.23 | pg/L | U | U | |
| Total TCDD | 41903575 | 1.83 | 4.76 | 1.83 | pg/L | U | U | |
| Total TCDFs | 55722275 | 1.89 | 4.76 | 1.89 | pg/L | U | U | |

*Analysis Method 1613B*

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084001 **Sample Date:** 9/30/2009 11:15:00 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 | 3.69 | 3.69 | 3.69 | pg/g | K | UJ | *III, RL changed from 3.69 and MDL from 0.416 |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 2.41 | 2.41 | 2.41 | pg/g | J | U | B, result changed from 0.73 and EDL from 0.183 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.362 | 2.41 | 0.362 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 2.41 | 2.41 | 2.41 | pg/g | JK | UJ | *III, result changed from 0.37 and MDL from 0.229 |
| 1,2,3,4,7,8-HxCDF | 70648269 | 2.41 | 2.41 | 2.41 | pg/g | J | U | B, result changed from 0.22 and EDL from 0.202 |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.262 | 2.41 | 0.262 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 2.41 | 2.41 | 2.41 | pg/g | JK | UJ | *III, result changed from 0.316 and MDL from 0.216 |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.418 | 2.41 | 0.258 | pg/g | J | J | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.316 | 2.41 | 0.316 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 2.41 | 2.41 | 2.41 | pg/g | JK | UJ | *III, result changed from 0.247 and MDL from 0.185 |
| 1,2,3,7,8-PeCDF | 57117416 | 2.41 | 2.41 | 2.41 | pg/g | JK | UJ | *III, result changed from 0.291 and MDL from 0.165 |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.243 | 2.41 | 0.243 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.335 | 2.41 | 0.157 | pg/g | J | J | |
| 2,3,7,8-TCDD | 1746016 | 0.188 | 0.482 | 0.188 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.883 | 0.963 | 0.216 | pg/g | J | J | |
| 2,3,7,8-TCDF | 51207319 | 0.428 | 0.482 | 0.36 | pg/g | JK | R | D |
| OCDD | 3268879 | 26.3 | 4.82 | 0.802 | pg/g | | | |
| OCDF | 39001020 | 1.68 | 4.82 | 0.84 | pg/g | J | J | |

*Analysis Method* *1613B*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total HpCDD | 37871004 | 9.35 | 2.41 | 0.416 pg/g | | J | B, *III |
| Total HpCDF | 38998753 | 1.44 | 2.41 | 0.183 pg/g | J | J | B |
| Total HxCDD | 34465468 | 2.35 | 2.41 | 0.229 pg/g | J | J | B, *III |
| Total HxCDF | 55684941 | 1.99 | 2.41 | 0.202 pg/g | J | J | B, *III |
| Total PeCDD | 36088229 | 0.247 | 2.41 | 0.185 pg/g | J | J | B, *III |
| Total PeCDF | 30402154 | 2.94 | 2.41 | 0.101 pg/g | | J | B, *III |
| Total TCDD | 41903575 | 0.898 | 0.482 | 0.188 pg/g | | | |
| Total TCDFs | 55722275 | 1.74 | 0.482 | 0.36 pg/g | B | J | B, *III |

*Analysis Method 1613B*

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084002 **Sample Date:** 9/30/2009 11:30:00 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 | 0.46 | 2.37 | 0.38 | pg/g | J | J | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 2.37 | 2.37 | 2.37 | pg/g | J | U | B, result changed from 0.284 and EDL from 0.193 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.379 and MDL from 0.361 |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.242 | 2.37 | 0.21 | pg/g | J | J | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 2.37 | 2.37 | 2.37 | pg/g | J | U | B, result changed from 0.231 and EDL from 0.147 |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.227 | 2.37 | 0.227 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.206 and MDL from 0.152 |
| 1,2,3,7,8,9-HxCDD | 19408743 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.301 and MDL from 0.229 |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.314 | 2.37 | 0.21 | pg/g | J | J | |
| 1,2,3,7,8-PeCDD | 40321764 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.199 and MDL from 0.145 |
| 1,2,3,7,8-PeCDF | 57117416 | 0.199 | 2.37 | 0.122 | pg/g | J | J | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.252 and MDL from 0.156 |
| 2,3,4,7,8-PeCDF | 57117314 | 0.201 | 2.37 | 0.12 | pg/g | J | J | |
| 2,3,7,8-TCDD | 1746016 | 0.18 | 0.473 | 0.18 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.422 | 0.473 | 0.199 | pg/g | JK | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.566 | 0.946 | 0.139 | pg/g | J | J | |

*Analysis Method 1613B*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| OCDD | 3268879 | 4.73 | 4.73 | 4.73 pg/g | JK | UJ | *III, result changed from 1.67 and MDL from 0.837 |
| OCDF | 39001020 | 0.791 | 4.73 | 0.791 pg/g | U | U | |
| Total HpCDD | 37871004 | 0.46 | 2.37 | 0.38 pg/g | J | J | B |
| Total HpCDF | 38998753 | 0.662 | 2.37 | 0.193 pg/g | J | J | B, *III |
| Total HxCDD | 34465468 | 0.543 | 2.37 | 0.21 pg/g | J | J | B, *III |
| Total HxCDF | 55684941 | 1 | 2.37 | 0.147 pg/g | J | J | B, *III |
| Total PeCDD | 36088229 | 0.199 | 2.37 | 0.145 pg/g | J | J | B, *III |
| Total PeCDF | 30402154 | 0.399 | 2.37 | 0.12 pg/g | J | J | B |
| Total TCDD | 41903575 | 0.18 | 0.473 | 0.18 pg/g | U | U | |
| Total TCDFs | 55722275 | 0.693 | 0.473 | 0.199 pg/g | B | J | B, *III |

## *Analysis Method 1613B*

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084003 **Sample Date:** 9/30/2009 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 | 4.56 | 2.37 | 0.388 | pg/g | | | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.676 and MDL from 0.191 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.35 | 2.37 | 0.35 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.212 | 2.37 | 0.212 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 2.37 | 2.37 | 2.37 | pg/g | J | U | B, result changed from 0.159 and EDL from 0.143 |
| 1,2,3,6,7,8-HxCDD | 57653857 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.329 and MDL from 0.223 |
| 1,2,3,6,7,8-HxCDF | 57117449 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.218 and MDL from 0.148 |
| 1,2,3,7,8,9-HxCDD | 19408743 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.401 and MDL from 0.229 |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.222 | 2.37 | 0.222 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.182 and MDL from 0.172 |
| 1,2,3,7,8-PeCDF | 57117416 | 0.193 | 2.37 | 0.193 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 2.37 | 2.37 | 2.37 | pg/g | JK | UJ | *III, result changed from 0.184 and MDL from 0.158 |
| 2,3,4,7,8-PeCDF | 57117314 | 0.309 | 2.37 | 0.171 | pg/g | J | J | |
| 2,3,7,8-TCDD | 1746016 | 0.161 | 0.473 | 0.161 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.564 | 0.473 | 0.275 | pg/g | | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.625 | 0.947 | 0.159 | pg/g | J | J | |
| OCDD | 3268879 | 28.6 | 4.73 | 0.765 | pg/g | | | |
| OCDF | 39001020 | 1.28 | 4.73 | 0.719 | pg/g | J | J | |

*Analysis Method 1613B*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total HpCDD | 37871004 | 11.9 | 2.37 | 0.388 pg/g | | J | B |
| Total HpCDF | 38998753 | 1.41 | 2.37 | 0.191 pg/g | J | J | B, *III |
| Total HxCDD | 34465468 | 2.5 | 2.37 | 0.212 pg/g | | J | B, *III |
| Total HxCDF | 55684941 | 1.85 | 2.37 | 0.143 pg/g | J | J | B, *III |
| Total PeCDD | 36088229 | 0.399 | 2.37 | 0.172 pg/g | J | J | B, *III |
| Total PeCDF | 30402154 | 2.78 | 2.37 | 0.0869 pg/g | | J | B |
| Total TCDD | 41903575 | 0.252 | 0.473 | 0.161 pg/g | J | J | |
| Total TCDFs | 55722275 | 2.27 | 0.473 | 0.275 pg/g | B | J | B |

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084004 **Sample Date:** 9/30/2009 12:50:00 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 | 0.429 | 4.55 | 0.429 | pg/g | U | U | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.2 | 4.55 | 0.2 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.388 | 4.55 | 0.388 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.222 | 4.55 | 0.222 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.142 | 4.55 | 0.142 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.244 | 4.55 | 0.244 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.142 | 4.55 | 0.142 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.244 | 4.55 | 0.244 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.22 | 4.55 | 0.22 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.146 | 4.55 | 0.146 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.115 | 4.55 | 0.115 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.152 | 4.55 | 0.152 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.12 | 4.55 | 0.12 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.175 | 0.91 | 0.175 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.322 | 0.91 | 0.209 | pg/g | JK | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.413 | 0.91 | 0.149 | pg/g | J | J | |
| OCDD | 3268879 | 0.906 | 9.1 | 0.906 | pg/g | U | U | |
| OCDF | 39001020 | 0.863 | 9.1 | 0.863 | pg/g | U | U | |
| Total HpCDD | 37871004 | 0.429 | | 0.429 | pg/g | U | U | |
| Total HpCDF | 38998753 | 0.2 | | 0.2 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.222 | | 0.222 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.142 | | 0.142 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.146 | | 0.146 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.115 | | 0.115 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.175 | | 0.175 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.604 | | 0.209 | pg/g | B | J | B, *III |

## *Analysis Method 1613B*

**Sample Name** HZET0718S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084005 **Sample Date:** 9/30/2009 1:15:00 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 | 158 | 3.85 | 0.863 | pg/g | | | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 17.3 | 3.85 | 0.202 | pg/g | | | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 1.03 | 3.85 | 0.389 | pg/g | J | J | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 1.34 | 3.85 | 0.272 | pg/g | J | J | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 3.85 | 3.85 | 3.85 | pg/g | J | U | B, result changed from 1.52 and EDL from 0.222 |
| 1,2,3,6,7,8-HxCDD | 57653857 | 5.11 | 3.85 | 0.303 | pg/g | | | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 1.15 | 3.85 | 0.231 | pg/g | J | J | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 2.44 | 3.85 | 0.302 | pg/g | J | J | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.814 | 3.85 | 0.283 | pg/g | J | J | |
| 1,2,3,7,8-PeCDD | 40321764 | 3.85 | 3.85 | 3.85 | pg/g | JK | UJ | *III, result changed from 0.825 and MDL from 0.151 |
| 1,2,3,7,8-PeCDF | 57117416 | 1.3 | 3.85 | 0.171 | pg/g | J | J | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 1.09 | 3.85 | 0.239 | pg/g | J | J | |
| 2,3,4,7,8-PeCDF | 57117314 | 1.13 | 3.85 | 0.163 | pg/g | J | J | |
| 2,3,7,8-TCDD | 1746016 | 0.157 | 0.77 | 0.157 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 1.23 | 0.77 | 0.3 | pg/g | | | |
| 2,3,7,8-TCDF | 51207319 | 0.774 | 0.77 | 0.15 | pg/g | | R | D |
| OCDD | 3268879 | 2550 | 7.7 | 1.19 | pg/g | | | |
| OCDF | 39001020 | 64.8 | 7.7 | 0.5 | pg/g | | | |
| Total HpCDD | 37871004 | 574 | | 0.863 | pg/g | | J | B |
| Total HpCDF | 38998753 | 57.2 | | 0.202 | pg/g | | J | B |
| Total HxCDD | 34465468 | 36.3 | | 0.272 | pg/g | | J | B |
| Total HxCDF | 55684941 | 28.2 | | 0.222 | pg/g | | J | B |
| Total PeCDD | 36088229 | 4.41 | | 0.151 | pg/g | | J | B, *III |
| Total PeCDF | 30402154 | 15.2 | | 0.0791 | pg/g | | J | B |
| Total TCDD | 41903575 | 0.223 | | 0.157 | pg/g | | | |
| Total TCDFs | 55722275 | 6.06 | | 0.3 | pg/g | B | J | B |

## *Analysis Method 1613B*

**Sample Name** HZET0719S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084006 **Sample Date:** 9/30/2009 1:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 3.82 | 4.33 | 0.369 | pg/g | J | J | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 4.33 | 4.33 | 4.33 | pg/g | J | U | B, result changed from 0.516 and EDL from 0.184 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.357 | 4.33 | 0.357 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.197 | 4.33 | 0.197 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.141 | 4.33 | 0.141 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.213 | 4.33 | 0.213 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.142 | 4.33 | 0.142 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.216 | 4.33 | 0.216 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.209 | 4.33 | 0.209 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.14 | 4.33 | 0.14 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.109 | 4.33 | 0.109 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.144 | 4.33 | 0.144 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.107 | 4.33 | 0.107 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.152 | 0.866 | 0.152 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.362 | 0.866 | 0.133 | pg/g | JK | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.866 | 0.866 | 0.866 | pg/g | JK | UJ | *III, result changed from 0.334 and MDL from 0.199 |
| OCDD | 3268879 | 41.4 | 8.66 | 0.741 | pg/g | | | |
| OCDF | 39001020 | 2.11 | 8.66 | 0.76 | pg/g | J | J | |
| Total HpCDD | 37871004 | 11.4 | | 0.369 | pg/g | | J | B |
| Total HpCDF | 38998753 | 1.6 | | 0.184 | pg/g | | J | B |
| Total HxCDD | 34465468 | 0.779 | | 0.197 | pg/g | | J | B |
| Total HxCDF | 55684941 | 0.431 | | 0.141 | pg/g | | J | B |
| Total PeCDD | 36088229 | 0.14 | | 0.14 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.084 | | 0.084 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.152 | | 0.152 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.576 | | 0.199 | pg/g | B | J | B, *III |

## *Analysis Method 1613B*

**Sample Name** HZET0720S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084007 **Sample Date:** 9/30/2009 1:55:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 4.5 | 4.5 | 4.5 | pg/g | JK | UJ | *III, result changed from 0.443 and MDL from 0.439 |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.18 | 4.5 | 0.18 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.338 | 4.5 | 0.338 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.185 | 4.5 | 0.185 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.132 | 4.5 | 0.132 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.203 | 4.5 | 0.203 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.136 | 4.5 | 0.136 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.203 | 4.5 | 0.203 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.203 | 4.5 | 0.203 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.138 | 4.5 | 0.138 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.113 | 4.5 | 0.113 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.146 | 4.5 | 0.146 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.114 | 4.5 | 0.114 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.164 | 0.9 | 0.164 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.369 | 0.9 | 0.189 | pg/g | J | J | |
| 2,3,7,8-TCDF | 51207319 | 0.438 | 0.9 | 0.149 | pg/g | J | R | D |
| OCDD | 3268879 | 9 | 9 | 9 | pg/g | J | U | B, result changed from 3.21 and EDL from 0.825 |
| OCDF | 39001020 | 0.798 | 9 | 0.798 | pg/g | U | U | |
| Total HpCDD | 37871004 | 1.18 | | 0.439 | pg/g | | J | B, *III |
| Total HpCDF | 38998753 | 0.18 | | 0.18 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.185 | | 0.185 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.132 | | 0.132 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.138 | | 0.138 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.113 | | 0.113 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.164 | | 0.164 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.652 | | 0.189 | pg/g | B | J | B |

## *Analysis Method 1613B*

**Sample Name** HZET0721S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084008 **Sample Date:** 9/30/2009 2:05:00 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 | 4.41 | 4.41 | 4.41 | pg/g | JK | UJ | *III, result changed from 0.494 and MDL from 0.431 |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.208 | 4.41 | 0.208 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.396 | 4.41 | 0.396 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.208 | 4.41 | 0.208 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.136 | 4.41 | 0.136 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.244 | 4.41 | 0.244 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.145 | 4.41 | 0.145 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.237 | 4.41 | 0.237 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.217 | 4.41 | 0.217 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.166 | 4.41 | 0.166 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.138 | 4.41 | 0.138 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.151 | 4.41 | 0.151 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.127 | 4.41 | 0.127 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.187 | 0.883 | 0.187 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.33 | 0.883 | 0.208 | pg/g | JK | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.396 | 0.883 | 0.146 | pg/g | J | J | |
| OCDD | 3268879 | 8.83 | 8.83 | 8.83 | pg/g | J | U | B, result changed from 3.08 and EDL from 0.848 |
| OCDF | 39001020 | 0.8 | 8.83 | 0.8 | pg/g | U | U | |
| Total HpCDD | 37871004 | 1.03 | | 0.431 | pg/g | | J | B, *III |
| Total HpCDF | 38998753 | 0.208 | | 0.208 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.208 | | 0.208 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.136 | | 0.136 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.166 | | 0.166 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.127 | | 0.127 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.187 | | 0.187 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.705 | | 0.208 | pg/g | B | J | B, *III |

## *Analysis Method 1613B*

**Sample Name** HZET0722S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084009 **Sample Date:** 9/30/2009 2:16:00 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 | 1.95 | 4.46 | 0.503 | pg/g | J | J | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 4.46 | 4.46 | 4.46 | pg/g | J | U | B, result changed from 0.63 and EDL from 0.23 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.466 | 4.46 | 0.466 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.219 | 4.46 | 0.219 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 4.46 | 4.46 | 4.46 | pg/g | JK | UJ | *III, result changed from 0.239 and MDL from 0.146 |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.243 | 4.46 | 0.243 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.158 | 4.46 | 0.158 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.243 | 4.46 | 0.243 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.209 | 4.46 | 0.209 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.182 | 4.46 | 0.182 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 4.46 | 4.46 | 4.46 | pg/g | JK | UJ | *III, result changed from 0.203 and MDL from 0.157 |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.209 | 4.46 | 0.154 | pg/g | J | J | |
| 2,3,4,7,8-PeCDF | 57117314 | 4.46 | 4.46 | 4.46 | pg/g | JK | UJ | *III, result changed from 0.214 and EDL from 0.154 |
| 2,3,7,8-TCDD | 1746016 | 0.186 | 0.892 | 0.186 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.325 | 0.892 | 0.117 | pg/g | J | J | |
| 2,3,7,8-TCDF | 51207319 | 0.325 | 0.892 | 0.202 | pg/g | JK | R | D |
| OCDD | 3268879 | 36.8 | 8.92 | 1.32 | pg/g | | | |
| OCDF | 39001020 | 1.63 | 8.92 | 0.912 | pg/g | J | J | |
| Total HpCDD | 37871004 | 9.3 | | 0.503 | pg/g | | J | B |
| Total HpCDF | 38998753 | 1.46 | | 0.23 | pg/g | | J | B |
| Total HxCDD | 34465468 | 0.219 | | 0.219 | pg/g | U | U | |
| Total HxCDF | 55684941 | 1.37 | | 0.146 | pg/g | | J | B, *III |
| Total PeCDD | 36088229 | 0.182 | | 0.182 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.55 | | 0.104 | pg/g | | J | B, *III |
| Total TCDD | 41903575 | 0.186 | | 0.186 | pg/g | U | U | |

## *Analysis Method 1613B*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total TCDFs | 55722275 | 0.576 | | 0.202 pg/g | B | J | B, *III |

**Sample Name** HZET0723S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084010 **Sample Date:** 9/30/2009 2:25:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 4.32 | 4.32 | 4.32 | pg/g | JK | UJ | *III, result changed from 1.48 and EDL from 0.846 |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 4.32 | 4.32 | 4.32 | pg/g | J | U | B, result changed from 0.47 and EDL from 0.364 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.82 | 4.32 | 0.82 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.371 | 4.32 | 0.371 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.254 | 4.32 | 0.254 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.411 | 4.32 | 0.411 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.257 | 4.32 | 0.257 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.409 | 4.32 | 0.409 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.425 | 4.32 | 0.425 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.278 | 4.32 | 0.278 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.216 | 4.32 | 0.216 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.278 | 4.32 | 0.278 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.211 | 4.32 | 0.211 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.299 | 0.863 | 0.299 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.385 | 0.863 | 0.15 | pg/g | J | J | |
| 2,3,7,8-TCDF | 51207319 | 0.468 | 0.863 | 0.359 | pg/g | JK | R | D |
| OCDD | 3268879 | 14.9 | 8.63 | 2.3 | pg/g | | | |
| OCDF | 39001020 | 1.76 | 8.63 | 1.76 | pg/g | U | U | |
| Total HpCDD | 37871004 | 4.7 | | 0.846 | pg/g | | J | B, *III |
| Total HpCDF | 38998753 | 1.04 | | 0.364 | pg/g | | J | B |
| Total HxCDD | 34465468 | 0.371 | | 0.371 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.254 | | 0.254 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.278 | | 0.278 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.173 | | 0.173 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.299 | | 0.299 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.468 | | 0.359 | pg/g | B | J | B, *III |

## *Analysis Method 1613B*

**Sample Name** HZET0724S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084011 **Sample Date:** 9/30/2009 1:30:00 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 | 1.01 | 4.66 | 1.01 | pg/g | U | U | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.522 | 4.66 | 0.522 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 1.09 | 4.66 | 1.09 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.516 | 4.66 | 0.516 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.308 | 4.66 | 0.308 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.552 | 4.66 | 0.552 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.306 | 4.66 | 0.306 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.561 | 4.66 | 0.561 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.503 | 4.66 | 0.503 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.384 | 4.66 | 0.384 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.233 | 4.66 | 0.233 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.328 | 4.66 | 0.328 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.235 | 4.66 | 0.235 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.362 | 0.932 | 0.362 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.406 | 0.932 | 0.406 | pg/g | U | U | |
| OCDD | 3268879 | 2.46 | 9.32 | 2.46 | pg/g | U | U | |
| OCDF | 39001020 | 2.29 | 9.32 | 2.29 | pg/g | U | U | |
| Total HpCDD | 37871004 | 1.01 | | 1.01 | pg/g | U | U | |
| Total HpCDF | 38998753 | 0.522 | | 0.522 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.516 | | 0.516 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.306 | | 0.306 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.384 | | 0.384 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.233 | | 0.233 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.362 | | 0.362 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.406 | | 0.406 | pg/g | U | U | |

## *Analysis Method 1613B*

**Sample Name** HZET0725S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1084012 **Sample Date:** 9/30/2009 1:25:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 7.3 | 4.49 | 0.683 | pg/g | | | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 4.49 | 4.49 | 4.49 | pg/g | JK | UJ | *III, result changed from 1.04 and EDL from 0.338 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.662 | 4.49 | 0.662 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.37 | 4.49 | 0.334 | pg/g | J | J | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.262 | 4.49 | 0.262 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.347 | 4.49 | 0.347 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.259 | 4.49 | 0.259 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.467 | 4.49 | 0.358 | pg/g | J | J | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.424 | 4.49 | 0.424 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.244 | 4.49 | 0.244 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.223 | 4.49 | 0.223 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.279 | 4.49 | 0.279 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.227 | 4.49 | 0.227 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.232 | 0.899 | 0.232 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.41 | 0.899 | 0.307 | pg/g | J | J | |
| 2,3,7,8-TCDF | 51207319 | 0.381 | 0.899 | 0.138 | pg/g | JK | R | D |
| OCDD | 3268879 | 122 | 8.99 | 1.63 | pg/g | | | |
| OCDF | 39001020 | 3.69 | 8.99 | 1.47 | pg/g | J | J | |
| Total HpCDD | 37871004 | 22.9 | | 0.683 | pg/g | | J | B |
| Total HpCDF | 38998753 | 2.21 | | 0.338 | pg/g | | J | B, *III |
| Total HxCDD | 34465468 | 2.03 | | 0.334 | pg/g | | J | B |
| Total HxCDF | 55684941 | 0.768 | | 0.259 | pg/g | | J | B |
| Total PeCDD | 36088229 | 0.244 | | 0.244 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.268 | | 0.151 | pg/g | | J | B |
| Total TCDD | 41903575 | 0.232 | | 0.232 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.888 | | 0.307 | pg/g | B | J | B |

## *Analysis Method 314.0-DI WET*

**Sample Name** HZBS0081AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180002 **Sample Date:** 9/30/2009 9:35:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 20 | 20 | | 5 ug/L | U | U | |

**Sample Name** HZBS0081AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180003 **Sample Date:** 9/30/2009 10:12:00 AM **Validation Level:** V

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

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180004 **Sample Date:** 9/30/2009 11:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 20 | 20 | | 5 ug/L | U | U | |

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180005 **Sample Date:** 9/30/2009 11:30:00 AM **Validation Level:** V

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

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180006 **Sample Date:** 9/30/2009 12:40:00 PM **Validation Level:** V

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

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180007 **Sample Date:** 9/30/2009 12:50:00 PM **Validation Level:** V

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

## *Analysis Method 6010B*

**Sample Name** EBQW2248 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238180001 **Sample Date:** 9/30/2009 2:45:00 PM **Validation Level:** V

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

**Sample Name** HZBS0081AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180002 **Sample Date:** 9/30/2009 9:35:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 15300 | 19.8 | | 6.72 mg/kg | | | |
| Antimony | 7440360 | 2.57 | 0.988 | | 0.326 mg/kg | | J | I |
| Boron | 7440428 | 4.22 | 4.94 | | 0.988 mg/kg | J | J | I |

**Sample Name** HZBS0081AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180003 **Sample Date:** 9/30/2009 10:12:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 15500 | 20.6 | | 7 mg/kg | | | |
| Antimony | 7440360 | 2.02 | 1.03 | | 0.34 mg/kg | | J | I |
| Boron | 7440428 | 3.16 | 5.15 | | 1.03 mg/kg | J | J | I |

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180004 **Sample Date:** 9/30/2009 11:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 10800 | 20.3 | | 6.89 mg/kg | | | |
| Antimony | 7440360 | 1.12 | 1.01 | | 0.334 mg/kg | | J | I |
| Boron | 7440428 | 3.47 | 5.07 | | 1.01 mg/kg | J | J | I |

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180005 **Sample Date:** 9/30/2009 11:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 16100 | 21.2 | | 7.21 mg/kg | | | |
| Antimony | 7440360 | 2.33 | 1.06 | | 0.35 mg/kg | | J | I |
| Boron | 7440428 | 2.84 | 5.3 | | 1.06 mg/kg | J | J | I |

## *Analysis Method 6010B*

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180006 **Sample Date:** 9/30/2009 12:40:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 10400 | 19.4 | 6.61 | mg/kg | | | |
| Antimony | 7440360 | 1.97 | 0.972 | 0.321 | mg/kg | | J | I |
| Boron | 7440428 | 3.73 | 4.86 | 0.972 | mg/kg | J | J | I |

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180007 **Sample Date:** 9/30/2009 12:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 12600 | 20 | 6.8 | mg/kg | | | |
| Antimony | 7440360 | 2.19 | 1 | 0.33 | mg/kg | | J | I |
| Boron | 7440428 | 2.36 | 5 | 1 | mg/kg | J | J | I |

## *Analysis Method 6020*

**Sample Name** EBQW2248 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238180001 **Sample Date:** 9/30/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5 | 5 | | 5 ug/L | J | U | B, result changed from 3.1 and MDL from 1.6 |
| Barium | 7440393 | 0.6 | 2 | | 0.6 ug/L | U | U | |
| Beryllium | 7440417 | 0.1 | 0.5 | | 0.1 ug/L | U | U | |
| Cadmium | 7440439 | 0.11 | 1 | | 0.11 ug/L | U | U | |
| Chromium | 7440473 | 2 | 10 | | 2 ug/L | U | U | |
| Cobalt | 7440484 | 0.1 | 1 | | 0.1 ug/L | U | U | |
| Copper | 7440508 | 1 | 1 | | 1 ug/L | J | U | B, result changed from 0.399 and MDL from 0.33 |
| Lead | 7439921 | 0.5 | 2 | | 0.5 ug/L | U | U | |
| Molybdenum | 7439987 | 0.167 | 0.5 | | 0.167 ug/L | U | U | |
| Nickel | 7440020 | 0.5 | 2 | | 0.5 ug/L | U | U | |
| Selenium | 7782492 | 1 | 5 | | 1 ug/L | U | U | |
| Silver | 7440224 | 0.2 | 1 | | 0.2 ug/L | U | U | |
| Thallium | 7440280 | 1 | 1 | | 1 ug/L | J | U | B, result changed from 0.929 and MDL from 0.3 |
| Vanadium | 7440622 | 3 | 10 | | 3 ug/L | U | U | |
| Zinc | 7440666 | 3 | 10 | | 3 ug/L | U | U | |

## *Analysis Method 6020*

**Sample Name** HZBS0081AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180002 **Sample Date:** 9/30/2009 9:35:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 6.25 | 0.967 | 0.193 | mg/kg | * | J | E |
| Barium | 7440393 | 95.9 | 0.387 | 0.0967 | mg/kg | * | J | E |
| Beryllium | 7440417 | 0.697 | 0.0967 | 0.0193 | mg/kg | *N | J | Q, E |
| Cadmium | 7440439 | 0.204 | 0.193 | 0.0193 | mg/kg | | | |
| Chromium | 7440473 | 21.2 | 0.58 | 0.193 | mg/kg | *E | J | E, A |
| Cobalt | 7440484 | 6.87 | 0.193 | 0.058 | mg/kg | *EN | J | Q, *III, A |
| Copper | 7440508 | 11.6 | 0.193 | 0.0638 | mg/kg | *EN | J | Q, E, A |
| Lead | 7439921 | 13.2 | 0.387 | 0.0967 | mg/kg | *N | J | Q, E |
| Molybdenum | 7439987 | 0.481 | 0.193 | 0.058 | mg/kg | | | |
| Nickel | 7440020 | 15.3 | 0.387 | 0.0967 | mg/kg | *EN | J | Q, E, A |
| Selenium | 7782492 | 0.484 | 0.967 | 0.484 | mg/kg | U | U | |
| Silver | 7440224 | 0.0716 | 0.193 | 0.0387 | mg/kg | J | J | |
| Thallium | 7440280 | 0.335 | 0.193 | 0.058 | mg/kg | | | |
| Vanadium | 7440622 | 48.7 | 9.67 | 1.93 | mg/kg | * | J | E |
| Zinc | 7440666 | 70.2 | 1.93 | 0.387 | mg/kg | * | J | E |

**Sample Name** HZBS0081AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180003 **Sample Date:** 9/30/2009 10:12:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 6.14 | 1.04 | 0.207 | mg/kg | * | J | E |
| Barium | 7440393 | 119 | 0.414 | 0.104 | mg/kg | * | J | E |
| Beryllium | 7440417 | 0.825 | 0.104 | 0.0207 | mg/kg | *N | J | Q, E |
| Cadmium | 7440439 | 0.165 | 0.207 | 0.0207 | mg/kg | J | J | |
| Chromium | 7440473 | 21.7 | 0.622 | 0.207 | mg/kg | *E | J | E, A |
| Cobalt | 7440484 | 6.96 | 0.207 | 0.0622 | mg/kg | *EN | J | Q, *III, A |
| Copper | 7440508 | 11 | 0.207 | 0.0684 | mg/kg | *EN | J | Q, E, A |
| Lead | 7439921 | 9.44 | 0.414 | 0.104 | mg/kg | *N | J | Q, E |
| Molybdenum | 7439987 | 0.474 | 0.207 | 0.0622 | mg/kg | | | |
| Nickel | 7440020 | 15.1 | 0.414 | 0.104 | mg/kg | *EN | J | Q, E, A |
| Selenium | 7782492 | 0.518 | 1.04 | 0.518 | mg/kg | U | U | |
| Silver | 7440224 | 0.092 | 0.207 | 0.0414 | mg/kg | J | J | |
| Thallium | 7440280 | 0.325 | 0.207 | 0.0622 | mg/kg | | | |
| Vanadium | 7440622 | 46.3 | 10.4 | 2.07 | mg/kg | * | J | E |
| Zinc | 7440666 | 63.8 | 2.07 | 0.414 | mg/kg | * | J | E |

## *Analysis Method 6020*

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180004 **Sample Date:** 9/30/2009 11:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.86 | 0.973 | 0.195 | mg/kg | * | J | E |
| Barium | 7440393 | 84.9 | 0.389 | 0.0973 | mg/kg | * | J | E |
| Beryllium | 7440417 | 0.619 | 0.0973 | 0.0195 | mg/kg | *N | J | Q, E |
| Cadmium | 7440439 | 0.224 | 0.195 | 0.0195 | mg/kg | | | |
| Chromium | 7440473 | 18.6 | 0.584 | 0.195 | mg/kg | *E | J | E, A |
| Cobalt | 7440484 | 5.83 | 0.195 | 0.0584 | mg/kg | *EN | J | Q, *III, A |
| Copper | 7440508 | 10.7 | 0.195 | 0.0642 | mg/kg | *EN | J | Q, E, A |
| Lead | 7439921 | 15 | 0.389 | 0.0973 | mg/kg | *N | J | Q, E |
| Molybdenum | 7439987 | 0.506 | 0.195 | 0.0584 | mg/kg | | | |
| Nickel | 7440020 | 13.9 | 0.389 | 0.0973 | mg/kg | *EN | J | Q, E, A |
| Selenium | 7782492 | 0.486 | 0.973 | 0.486 | mg/kg | U | U | |
| Silver | 7440224 | 0.0661 | 0.195 | 0.0389 | mg/kg | J | J | |
| Thallium | 7440280 | 0.299 | 0.195 | 0.0584 | mg/kg | | | |
| Vanadium | 7440622 | 39.6 | 9.73 | 1.95 | mg/kg | * | J | E |
| Zinc | 7440666 | 60.5 | 1.95 | 0.389 | mg/kg | * | J | E |

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180005 **Sample Date:** 9/30/2009 11:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.42 | 1.01 | 0.202 | mg/kg | * | J | E |
| Barium | 7440393 | 81.6 | 0.404 | 0.101 | mg/kg | * | J | E |
| Beryllium | 7440417 | 0.786 | 0.101 | 0.0202 | mg/kg | *N | J | Q, E |
| Cadmium | 7440439 | 0.0568 | 0.202 | 0.0202 | mg/kg | J | J | |
| Chromium | 7440473 | 20.9 | 0.606 | 0.202 | mg/kg | *E | J | E, A |
| Cobalt | 7440484 | 5.74 | 0.202 | 0.0606 | mg/kg | *EN | J | Q, *III, A |
| Copper | 7440508 | 9.03 | 0.202 | 0.0667 | mg/kg | *EN | J | Q, E, A |
| Lead | 7439921 | 8.14 | 0.404 | 0.101 | mg/kg | *N | J | Q, E |
| Molybdenum | 7439987 | 0.38 | 0.202 | 0.0606 | mg/kg | | | |
| Nickel | 7440020 | 12.5 | 0.404 | 0.101 | mg/kg | *EN | J | Q, E, A |
| Selenium | 7782492 | 0.505 | 1.01 | 0.505 | mg/kg | U | U | |
| Silver | 7440224 | 0.0584 | 0.202 | 0.0404 | mg/kg | J | J | |
| Thallium | 7440280 | 0.23 | 0.202 | 0.0606 | mg/kg | | | |
| Vanadium | 7440622 | 47 | 10.1 | 2.02 | mg/kg | * | J | E |
| Zinc | 7440666 | 49.2 | 2.02 | 0.404 | mg/kg | * | J | E |

## *Analysis Method 6020*

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180006 **Sample Date:** 9/30/2009 12:40:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.58 | 1 | 0.201 | mg/kg | * | J | E |
| Barium | 7440393 | 78.7 | 0.401 | 0.1 | mg/kg | * | J | E |
| Beryllium | 7440417 | 0.644 | 0.1 | 0.0201 | mg/kg | *N | J | Q, E |
| Cadmium | 7440439 | 0.187 | 0.201 | 0.0201 | mg/kg | J | J | |
| Chromium | 7440473 | 17 | 0.602 | 0.201 | mg/kg | *E | J | E, A |
| Cobalt | 7440484 | 5.4 | 0.201 | 0.0602 | mg/kg | *EN | J | Q, *III, A |
| Copper | 7440508 | 8.47 | 0.201 | 0.0662 | mg/kg | *EN | J | Q, E, A |
| Lead | 7439921 | 11.1 | 0.401 | 0.1 | mg/kg | *N | J | Q, E |
| Molybdenum | 7439987 | 0.458 | 0.201 | 0.0602 | mg/kg | | | |
| Nickel | 7440020 | 12.5 | 0.401 | 0.1 | mg/kg | *EN | J | Q, E, A |
| Selenium | 7782492 | 0.501 | 1 | 0.501 | mg/kg | U | U | |
| Silver | 7440224 | 0.0554 | 0.201 | 0.0401 | mg/kg | J | J | |
| Thallium | 7440280 | 0.253 | 0.201 | 0.0602 | mg/kg | | | |
| Vanadium | 7440622 | 33.5 | 10 | 2.01 | mg/kg | * | J | E |
| Zinc | 7440666 | 51.8 | 2.01 | 0.401 | mg/kg | * | J | E |

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180007 **Sample Date:** 9/30/2009 12:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 2.87 | 0.994 | 0.199 | mg/kg | * | J | E |
| Barium | 7440393 | 61.6 | 0.398 | 0.0994 | mg/kg | * | J | E |
| Beryllium | 7440417 | 0.664 | 0.0994 | 0.0199 | mg/kg | *N | J | Q, E |
| Cadmium | 7440439 | 0.0483 | 0.199 | 0.0199 | mg/kg | J | J | |
| Chromium | 7440473 | 12.2 | 0.596 | 0.199 | mg/kg | *E | J | E, A |
| Cobalt | 7440484 | 3.57 | 0.199 | 0.0596 | mg/kg | *EN | J | Q, *III, A |
| Copper | 7440508 | 4.65 | 0.199 | 0.0656 | mg/kg | *EN | J | Q, E, A |
| Lead | 7439921 | 5.12 | 0.398 | 0.0994 | mg/kg | *N | J | Q, E |
| Molybdenum | 7439987 | 0.274 | 0.199 | 0.0596 | mg/kg | | | |
| Nickel | 7440020 | 7.74 | 0.398 | 0.0994 | mg/kg | *EN | J | Q, E, A |
| Selenium | 7782492 | 0.497 | 0.994 | 0.497 | mg/kg | U | U | |
| Silver | 7440224 | 0.0398 | 0.199 | 0.0398 | mg/kg | U | U | |
| Thallium | 7440280 | 0.2 | 0.199 | 0.0596 | mg/kg | | | |
| Vanadium | 7440622 | 24 | 9.94 | 1.99 | mg/kg | * | J | E |
| Zinc | 7440666 | 41.2 | 1.99 | 0.398 | mg/kg | * | J | E |

## *Analysis Method 6020*

**Sample Name** HZET0718S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180008 **Sample Date:** 9/30/2009 1:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 9.91 | 0.202 | 0.0667 | mg/kg | *EN | J | Q, E, A |

**Sample Name** HZET0719S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180009 **Sample Date:** 9/30/2009 1:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 6.26 | 0.199 | 0.0657 | mg/kg | *EN | J | Q, E, A |

**Sample Name** HZET0720S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180010 **Sample Date:** 9/30/2009 1:55:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 5.41 | 0.207 | 0.0682 | mg/kg | *EN | J | Q, E, A |

**Sample Name** HZET0721S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180011 **Sample Date:** 9/30/2009 2:05:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 5.19 | 0.235 | 0.0776 | mg/kg | *EN | J | Q, E, A |

**Sample Name** HZET0722S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180012 **Sample Date:** 9/30/2009 2:16:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 4.21 | 0.197 | 0.0651 | mg/kg | *EN | J | Q, E, A |

**Sample Name** HZET0723S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180013 **Sample Date:** 9/30/2009 2:25:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 2.99 | 0.209 | 0.0689 | mg/kg | *EN | J | Q, E, A |

**Sample Name** HZET0724S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180014 **Sample Date:** 9/30/2009 1:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 6.11 | 0.204 | 0.0673 | mg/kg | *EN | J | Q, E, A |

*Analysis Method 6020*

**Sample Name** HZET0725S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180015 **Sample Date:** 9/30/2009 1:25:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Copper | 7440508 | 7.96 | 0.198 | 0.0652 | mg/kg | *EN | J | Q, E, A |

## *Analysis Method 6850*

**Sample Name** HZBS0081AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180002 **Sample Date:** 9/30/2009 9:35:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.203 | 0.203 | 0.0508 | ug/L | U | U | |

**Sample Name** HZBS0081AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180003 **Sample Date:** 9/30/2009 10:12:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.212 | 0.212 | 0.0529 | ug/L | U | U | |

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180004 **Sample Date:** 9/30/2009 11:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.204 | 0.204 | 0.0511 | ug/L | U | U | |

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180005 **Sample Date:** 9/30/2009 11:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.212 | 0.212 | 0.053 | ug/L | U | U | |

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180006 **Sample Date:** 9/30/2009 12:40:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.181 | 0.204 | 0.0509 | ug/L | J | J | |

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180007 **Sample Date:** 9/30/2009 12:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.209 | 0.209 | 0.0522 | ug/L | U | U | |

*Analysis Method 7470A*

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | EBQW2248 | **Matrix Type:** | Water | **Result Type:** | Primary Result |
| **Lab Sample Name:** | 238180001 | **Sample Date:** | 9/30/2009 2:45:00 PM | **Validation Level:** | V |

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.066 | 0.2 | 0.066 | ug/L | U | U | |

## *Analysis Method 7471A*

**Sample Name** HZBS0081AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180002 **Sample Date:** 9/30/2009 9:35:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0131 | 0.0118 | 0.00401 | mg/kg | *N | J | B, Q, *III |

**Sample Name** HZBS0081AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180003 **Sample Date:** 9/30/2009 10:12:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.00396 | 0.0117 | 0.00396 | mg/kg | U*N | UJ | *III |

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180004 **Sample Date:** 9/30/2009 11:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0174 | 0.0112 | 0.00382 | mg/kg | *N | J | B, Q, *III |

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180005 **Sample Date:** 9/30/2009 11:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.015 | 0.0107 | 0.00364 | mg/kg | *N | J | B, Q, *III |

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180006 **Sample Date:** 9/30/2009 12:40:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0153 | 0.0117 | 0.00399 | mg/kg | *N | J | B, Q, *III |

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180007 **Sample Date:** 9/30/2009 12:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.00916 | 0.0114 | 0.00389 | mg/kg | J*N | J | B, Q, *III |

## *Analysis Method 8015B*

**Sample Name** EBQW2248 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238180001 **Sample Date:** 9/30/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 96.2 | 96.2 | 31.7 | ug/L | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 96.2 | 96.2 | 31.7 | ug/L | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 96.2 | 96.2 | 31.7 | ug/L | U | U | |
| EFH (C8 - C11) | EFHD (C8- | 96.2 | 96.2 | 31.7 | ug/L | U | U | |

**Sample Name** HZBS0081AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180002 **Sample Date:** 9/30/2009 9:35:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.38 | 3.38 | 1.12 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.38 | 3.38 | 1.12 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 5.76 | 3.38 | 1.12 | mg/kg | | | |
| EFH (C8 - C11) | EFHD (C8- | 3.38 | 3.38 | 1.12 | mg/kg | U | U | |

**Sample Name** HZBS0081AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180003 **Sample Date:** 9/30/2009 10:12:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.52 | 3.52 | 1.16 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.52 | 3.52 | 1.16 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 3.52 | 3.52 | 1.16 | mg/kg | U | U | |
| EFH (C8 - C11) | EFHD (C8- | 3.52 | 3.52 | 1.16 | mg/kg | U | U | |

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180004 **Sample Date:** 9/30/2009 11:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 2.3 | 3.4 | 1.12 | mg/kg | J | J | |
| EFH (C21 - C30) | EFHD (C21 | 10.5 | 3.4 | 1.12 | mg/kg | | | |
| EFH (C8 - C11) | EFHD (C8- | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |

## *Analysis Method 8015B*

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180005 **Sample Date:** 9/30/2009 11:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.53 | 3.53 | 1.17 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.53 | 3.53 | 1.17 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 3.53 | 3.53 | 1.17 | mg/kg | U | U | |
| EFH (C8 - C11) | EFHD (C8- | 3.53 | 3.53 | 1.17 | mg/kg | U | U | |

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180006 **Sample Date:** 9/30/2009 12:40:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 3.12 | 3.4 | 1.12 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180007 **Sample Date:** 9/30/2009 12:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.48 | 3.48 | 1.15 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.48 | 3.48 | 1.15 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 3.48 | 3.48 | 1.15 | mg/kg | U | U | |
| EFH (C8 - C11) | EFHD (C8- | 3.48 | 3.48 | 1.15 | mg/kg | U | U | |

## *Analysis Method 8082*

**Sample Name** EBQW2248 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238180001 **Sample Date:** 9/30/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 0.0952 | 0.0952 | 0.0317 | ug/L | U | U | |
| Aroclor-1221 | 11104282 | 0.0952 | 0.0952 | 0.0317 | ug/L | U | U | |
| Aroclor-1232 | 11141165 | 0.0952 | 0.0952 | 0.0317 | ug/L | U | U | |
| Aroclor-1242 | 53469219 | 0.0952 | 0.0952 | 0.0317 | ug/L | U | U | |
| Aroclor-1248 | 12672296 | 0.0952 | 0.0952 | 0.0317 | ug/L | U | U | |
| Aroclor-1254 | 11097691 | 0.0952 | 0.0952 | 0.0317 | ug/L | U | U | |
| Aroclor-1260 | 11096825 | 0.0952 | 0.0952 | 0.0317 | ug/L | U | U | |

**Sample Name** HZBS0081AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180002 **Sample Date:** 9/30/2009 9:35:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 4.7 | 3.39 | 1.13 | ug/kg | P | J | *III |
| Aroclor-1260 | 11096825 | 2.9 | 3.39 | 1.13 | ug/kg | J | J | |

**Sample Name** HZBS0081AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180003 **Sample Date:** 9/30/2009 10:12:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |

## *Analysis Method 8082*

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180004 **Sample Date:** 9/30/2009 11:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 2.9 | 3.4 | 1.13 | ug/kg | Jp | J | *III |
| Aroclor-1260 | 11096825 | 4.4 | 3.4 | 1.13 | ug/kg | | | |

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180005 **Sample Date:** 9/30/2009 11:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.52 | 3.52 | 1.17 | ug/kg | U | U | |

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180006 **Sample Date:** 9/30/2009 12:40:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.39 | 3.39 | 1.13 | ug/kg | U | U | |

*Analysis Method 8082*

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180007 **Sample Date:** 9/30/2009 12:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.47 | 3.47 | 1.16 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.47 | 3.47 | 1.16 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.47 | 3.47 | 1.16 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.47 | 3.47 | 1.16 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.47 | 3.47 | 1.16 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.47 | 3.47 | 1.16 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.47 | 3.47 | 1.16 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** EBQW2248 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238180001 **Sample Date:** 9/30/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| 2-Methylnaphthalene | 91576 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Acenaphthene | 83329 | 0.472 | 0.472 | 0.146 | ug/L | U | U | |
| Acenaphthylene | 208968 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Anthracene | 120127 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(a)anthracene | 56553 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(a)pyrene | 50328 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(b)fluoranthene | 205992 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(ghi)perylene | 191242 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(k)fluoranthene | 207089 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 0.472 | 0.472 | 0.142 | ug/L | BJ | U | B, result changed from 0.216 |
| Butyl benzyl phthalate | 85687 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Chrysene | 218019 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Diethylphthalate | 84662 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Dimethylphthalate | 131113 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Di-n-butylphthalate | 84742 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Di-n-octyl-phthalate | 117840 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Fluoranthene | 206440 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Fluorene | 86737 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Naphthalene | 91203 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| n-Nitrosodimethylamine | 62759 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Phenanthrene | 85018 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Pyrene | 129000 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0081AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180002 **Sample Date:** 9/30/2009 9:35:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 16.9 | 16.9 | 3.39 | ug/kg | U | U | |
| Acenaphthene | 83329 | 16.9 | 16.9 | 5.65 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Anthracene | 120127 | 16.9 | 16.9 | 3.39 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 8.99 | 16.9 | 5.59 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Chrysene | 218019 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Fluoranthene | 206440 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Fluorene | 86737 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Naphthalene | 91203 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 16.9 | 16.9 | 3.39 | ug/kg | U | U | |
| Phenanthrene | 85018 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Pyrene | 129000 | 16.9 | 16.9 | 5.31 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0081AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180003 **Sample Date:** 9/30/2009 10:12:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.6 | 17.6 | 3.53 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.6 | 17.6 | 5.89 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Anthracene | 120127 | 17.6 | 17.6 | 3.53 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 6.84 | 17.6 | 5.82 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Chrysene | 218019 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Fluorene | 86737 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.6 | 17.6 | 3.53 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.6 | 17.6 | 5.29 | ug/kg | U | U | |
| Pyrene | 129000 | 17.6 | 17.6 | 5.54 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0178S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180004 **Sample Date:** 9/30/2009 11:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17 | 17 | 5.11 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17 | 17 | 3.4 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17 | 17 | 5.69 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Anthracene | 120127 | 17 | 17 | 3.4 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17 | 17 | 5.11 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 17.8 | 17 | 5.62 | ug/kg | | | |
| Butyl benzyl phthalate | 85687 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Chrysene | 218019 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Fluorene | 86737 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Naphthalene | 91203 | 17 | 17 | 5.11 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17 | 17 | 3.4 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Pyrene | 129000 | 17 | 17 | 5.35 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0178S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180005 **Sample Date:** 9/30/2009 11:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.7 | 17.7 | 3.53 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.7 | 17.7 | 5.9 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Anthracene | 120127 | 17.7 | 17.7 | 3.53 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 17.7 | 17.7 | 5.83 | ug/kg | U | U | |
| Butyl benzyl phthalate | 85687 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Chrysene | 218019 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Fluorene | 86737 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.7 | 17.7 | 3.53 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.7 | 17.7 | 5.3 | ug/kg | U | U | |
| Pyrene | 129000 | 17.7 | 17.7 | 5.54 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0179S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180006 **Sample Date:** 9/30/2009 12:40:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 16.9 | 16.9 | 3.39 | ug/kg | U | U | |
| Acenaphthene | 83329 | 16.9 | 16.9 | 5.65 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Anthracene | 120127 | 16.9 | 16.9 | 3.39 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 9.15 | 16.9 | 5.59 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Chrysene | 218019 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Fluoranthene | 206440 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Fluorene | 86737 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Naphthalene | 91203 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 16.9 | 16.9 | 3.39 | ug/kg | U | U | |
| Phenanthrene | 85018 | 16.9 | 16.9 | 5.08 | ug/kg | U | U | |
| Pyrene | 129000 | 16.9 | 16.9 | 5.32 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0179S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238180007 **Sample Date:** 9/30/2009 12:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.4 | 17.4 | 3.48 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.4 | 17.4 | 5.81 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Anthracene | 120127 | 17.4 | 17.4 | 3.48 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 6.23 | 17.4 | 5.74 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Chrysene | 218019 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Fluorene | 86737 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.4 | 17.4 | 3.48 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Pyrene | 129000 | 17.4 | 17.4 | 5.46 | ug/kg | U | U | |

# Chain of Custody and Supporting Documentation

BOEING 238234

# CHAIN OF CUSTODY RECORD

COC #: MWHBM20091001_00



| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | B. Martasin | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| 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 | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| | Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Dioxin by 1613B - Water | Metals by 6010/6020/7470A - Water | Metals by 6010/6020/7471A - Soil | PCB by SW8082 - Soil | PCB by SW8082 - Water | Perchlorate 314 Soil DI-WET | SVOCs by SW8270C SIM - Soil | SVOCs by SW8270C SIM - Water | TPH by SW8015BM - Soil | TPH by SW8015BM - Water | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EBQW2249 | Water | 10/1/2009 | 15:30 | 9 | | | 10 | 10 | | | 10 | | | 10 | | 10 | | | | |
| 2 | HVBF33AS01 | Soil | 10/1/2009 | 10:18 | 2 | 5 | 5 | | | | 5 | | | 5 | | 5 | | | | | |
| 2 | HVBF33AS02 | Soil | 10/1/2009 | 10:40 | 2 | 5 | 5 | | | | 5 | | | 5 | | 5 | | | | | |
| 3 | HZBS0080AS001 | Soil | 10/1/2009 | 14:35 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0080AS002 | Soil | 10/1/2009 | 14:45 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0082AS001 | Soil | 10/1/2009 | 8:30 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0082AS002 | Soil | 10/1/2009 | 9:05 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0084AS001 | Soil | 10/1/2009 | 7:50 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0084AS002 | Soil | 10/1/2009 | 8:15 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0123AS001 | Soil | 10/1/2009 | 13:15 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |

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 bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| | 10/1/09 | R.M. Stelling | 10/2/09 | | | | |
| Company: MWH | Time: 1445 | Company: Gel | Time: 915 | Company: | Time: | Company: | Time: |

Comments:

Geotracker EDF ☐

Data Validation Package ☑ Level IV

# CHAIN OF CUSTODY RECORD

COC #: MWHBM20091001_00



| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | B. Martasin | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| 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 | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| | Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Dioxin by 1613B - Water | Metals by 6010/6020/7470A - Water | Metals by 6010/6020/7471A - Soil | PCB by SW8082 - Soil | PCB by SW8082 - Water | Perchlorate 314 Soil DI-WET | SVOCs by SW8270C SIM - Soil | SVOCs by SW8270C SIM - Water | TPH by SW8015BM - Soil | TPH by SW8015BM - Water | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| .3 ✓ | HZBS0123AS002 | Soil | 10/1/2009 | 13:30 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| .3 | HZBS0124AS001 | Soil | 10/1/2009 | 11:00 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| .3 ✓ | HZBS0124AS002 | Soil | 10/1/2009 | 12:30 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| .2 ✓ | HZBS0175S001 | Soil | 10/1/2009 | 13:50 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| ✓ | HZBS0175S002 | Soil | 10/1/2009 | 14:10 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0177S001 | Soil | 10/1/2009 | 15:00 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0177S002 | Soil | 10/1/2009 | 15:15 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0180S001 | Soil | 10/1/2009 | 9:30 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |
| | HZBS0180S002 | Soil | 10/1/2009 | 10:00 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | | | | |

Requested Analyses

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 bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| | 10/1/09 | R.M. Stelling | 10/2/09 | | | | |
| Company: MWH | Time: 1445 | Company: Gel | Time: 915 | Company: | Time: | Company: | Time: |

Comments:

Geotracker EDF ☐

Data Validation Package ☑ Level IV

GEL Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| **Client:** SSFI | **SDG/ARCOC/Work Order:** 238234 |
| **Received By:** RMS | **Date Received:** 10/2/09 |

| **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? | | ✓ | Maximum Counts Observed*: |
| Classified Radioactive II or III by RSO? | | ✓ | 30 cpm |
| COC/Samples marked containing PCBs? | | ✓ | |
| Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#: |
| Samples identified as Foreign Soil? | | ✓ | |

| | **Sample Receipt Criteria** | Yes | NA | No | **Comments/Qualifiers (Required for Non-Conforming Items)** |
|---|---|---|---|---|---|
| 1 | Shipping containers received intact and sealed? | ✓ | | | Circle Applicable: seals broken damaged container leaking container other (describe) |
| 2 | Samples requiring cold preservation within (0 ≤ 6 deg. C)? | ✓ | | | Preservation Method: (ice bags) blue ice dry ice none other (describe) 2, 2, 3° |
| 3 | Chain of custody documents included with shipment? | ✓ | | | |
| 4 | Sample containers intact and sealed? | | | ✓ | Circle Applicable: seals broken (damaged container) leaking container other (describe) received (2) broken Amber 1L ID: EBRW2249 |
| 5 | Samples requiring chemical preservation at proper pH? | ✓ | | | Sample ID's, containers affected and observed pH: If Preservation added, Lot#: |
| 6 | VOA vials free of headspace (defined as < 6mm bubble)? | ✓ | | | Sample ID's and containers affected: |
| 7 | Are Encore containers present? | ✓ | | | (If yes, immediately deliver to Volatiles laboratory) |
| 8 | Samples received within holding time? | ✓ | | | Id's and tests affected: |
| 9 | Sample ID's on COC match ID's on bottles? | ✓ | | | Sample ID's and containers affected: |
| 10 | Date & time on COC match date & time on bottles? | ✓ | | | Sample ID's affected: |
| 11 | Number of containers received match number indicated on COC? | ✓ | | | Sample ID's affected: |
| 12 | COC form is properly signed in relinquished/received sections? | ✓ | | | |

Comments:
Fx: 9457 5163 0800
" " 0795
" 3159 3987

PM (or PMA) review: Initials AMS Date 10/2/09

**Subject:** RE: Regarding Sample Receipt on 10/2/09
**From:** Sarah Von Raesfeld <Sarah.E.VonRaesfeld@us.mwhglobal.com>
**Date:** Fri, 2 Oct 2009 10:08:24 -0600
**To:** Ann Skradski <ann.skradski@gel.com>, team.trudell <team.trudell@gel.com>
**CC:** Sean Leffler <Sean.S.Leffler@us.mwhglobal.com>, Allison Ruotolo <Allison.M.Ruotolo@us.mwhglobal.com>

Hi Ann,

Please proceed with the analyses per the COC and we will keep our fingers crossed that no re-extractions are needed.

Thank you.

-----Original Message-----
From: Ann Skradski [mailto:ann.skradski@gel.com]
Sent: Friday, October 02, 2009 8:45 AM
To: Sarah Von Raesfeld; team.trudell
Subject: Regarding Sample Receipt on 10/2/09

Good morning Sarah.

I am stepping in for Jackie while she is out of the office today.

Today GEL received 2 broken 1L ambers for Sample ID EBQW2249. If we are conservative and we don't have re-runs we should be able to continue with all requested analysis. Please advise as to how you would like us to proceed. All other items in this shipment were received in good condition.
Thank you for your time.
Ann

--
Ann M. Skradski
Project Manager
GEL Laboratories, LLC
2040 Savage Road
PO Box 30712
Charleston, SC 29417
(843) 769-7386
(843) 766-1178 fax
Ann.Skradski@gel.com

**Date:** 10/27/09

**Requesting Firm:** MWH
**Address:** 9444 Farnham Suite 300
San Diego, CA 92123
**Phone:** 858-751-1217
**Fax:** 858-751-1201
**E-mail:** Sean.leffler@mwhglobal.com

**To:** Jackie Trudell **Phone:** 843-769-7388

**Laboratory** GEL Laboratories, LLC **E-mail:** jacqueline.trudell@gel.com

**From:** Sean Leffler

**Requestor signature:**

**Subject:** **Chain-of-Custody Form Analytical Request Change** **No. of Pages:** 3

**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 |
|---|---|---|---|---|
| MWHBM20 091001_00 | HZBS0080AS001, HZBS0080AS002 | 10/1/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0082AS001, HZBS0082AS002 | 10/1/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0084AS001, HZBS0084AS002 | 10/1/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0123AS001, HZBS0123AS002 | 10/1/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0124AS001, HZBS0124AS002 | 10/1/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0175S001, HZBS0175S002 | 10/1/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0177S001, HZBS0177S002 | 10/1/09 | | Run perchlorate by 6850 |
| MWHBM20 091001_00 | HZBS0180S001, HZBS0180S002 | 10/1/09 | | Run perchlorate by 6850 |

The reason for these changes:

| | |
|---|---|
| *Incorrectly marked on COC form* | |
| *Lack of sample volume* | |
| *Change in analytical request* | *X* |
| *Other:* | |

Thank you

BOEING 238234

# CHAIN OF CUSTODY RECORD

COC #: MWHBM20091001_00



| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | B. Martasin | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| 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 | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| | Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Dioxin by 1613B - Soil | Dioxin by 1613B - Water | Metals by 6010B/7470A - Water | Metals by 6010B/7471A - Soil | PCB by SW8082 - Soil | PCB by SW8082 - Water | Perchlorate 314 Soil DI-WET | SVOCs by SW8270C SIM - Soil | SVOCs by SW8270C SIM - Water | TPH by SW8015BM - Soil | TPH by SW8015BM - Water | Metals 6010B Soil Aluminum | Metals 6010B Soil Boron | Perchlorate 8330 80:1 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Requested Analyses | | | | | | | | | | | | | | | | | | | | Instructions/TAT |
| 1 | EBQW2249 | Water | 10/1/2009 | 15:30 | 9 | | | 10 | 10 | | | 10 | | | 10 | | 10 | | | | |
| 2 | HVBF33AS01 | Soil | 10/1/2009 | 10:16 | 2 | 5 | 5 | | | | 5 | | | 5 | | 5 | | 2 | 2 | | |
| 2 | HVBF33AS02 | Soil | 10/1/2009 | 10:40 | 2 | 5 | 5 | | | | 5 | | | 5 | | 5 | | 2 | 2 | | |
| 3 | HZBS0080AS001 | Soil | 10/1/2009 | 14:35 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | 10 | |
| | HZBS0080AS002 | Soil | 10/1/2009 | 14:45 | 3 | 5 | 5 | 0 | | 2 | 5 | | 5 | 5 | | 5 | | | | 10 | |
| | HZBS0082AS001 | Soil | 10/1/2009 | 8:30 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | 10 | |
| | HZBS0082AS002 | Soil | 10/1/2009 | 9:05 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | 10 | |
| | HZBS0084AS001 | Soil | 10/1/2009 | 7:50 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | 10 | |
| | HZBS0084AS002 | Soil | 10/1/2009 | 8:15 | 3 | 5 | 5 | 0 | | 2 | 5 | | 5 | 5 | | 5 | | | | 10 | |
| | HZBS0123AS001 | Soil | 10/1/2009 | 13:15 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | | | 10 | |

Legend:
Numerical values for analyses equate to turn around time in days

H - Hold
EH - Extract/Extrude & Hold

Note: Values in the cells bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| | 10/1/09 | R.M. Stelling | 10/2/09 | | | | |
| Company: MWH | Time: 1445 | Company: GEL | Time: 915 | Company: | Time: | Company: | Time: |

Comments:

Geotracker EDF ☐

Data Validation Package ☑ Level IV

(1) SSL 10/8/09 (2) SSL 10/20/09

10

# CHAIN OF CUSTODY RECORD

COC #: MWHBM20091001_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, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| 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 | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7368 | | | | |

| Sample Name | Matrix | Date | Time | No. of Containers | Requested Analyses: D2216 Moisture Soil | Dioxin by 1613B - Soil | Dioxin by 1613B - Water | Metals by 6010/6020/7470A - Water | Metals by 6010/6020/7471A - Soil | PCB by SW8082 - Soil | PCB by SW8082 - Water | Perchlorate 314 Soil DI-WET | SVOCs by SW8270C SIM - Soil | SVOCs by SW8270C SIM - Water | TPH by SW8015BM - Soil | TPH by SW8015BM - Water | Perchlorate 8330 Soil | | | Instructions/TAT / Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HZBS0123AS002 | Soil | 10/1/2009 | 13:30 | 3 | 5 | 5 | D | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | | |
| HZBS0124AS001 | Soil | 10/1/2009 | 11:00 | 3 | 5 | | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | | |
| HZBS0124AS002 | Soil | 10/1/2009 | 12:30 | 3 | 5 | 5 | D | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | | |
| HZBS0175S001 | Soil | 10/1/2009 | 13:50 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | | |
| HZBS0175S002 | Soil | 10/1/2009 | 14:10 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | | |
| HZBS0177S001 | Soil | 10/1/2009 | 15:00 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | | |
| HZBS0177S002 | Soil | 10/1/2009 | 15:15 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | | |
| HZBS0180S001 | Soil | 10/1/2009 | 9:30 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | 10 | | | |
| HZBS0180S002 | Soil | 10/1/2009 | 10:00 | 3 | 5 | 5 | | | 2 | 5 | | 5 | 5 | | 5 | | 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.

Perchlorate 8330 Soil

(3)

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| | 10/1/09 | R.M. Stelling | 10/2/09 | | | | |
| Company: MWH | Time: 1445 | Company: GEL | Time: 915 | Company: | Time: | Company: | Time: |

Comments:

Geotracker EDF ☐

Data Validation Package ☑ Level IV

USL 10/8/09 (3) SSC 10/27/09

11

# LABORATORY TASK ORDER (LTO) FORM

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

**Event Name:** ISRA Sampling, August 2009 **Start:** 8/24/2009 **End:** 9/30/2009

**LTO DATE:** **LTO NUMBER:**

| | | | |
|---|---|---|---|
| **Consultant Name:** | MWH | **Contract Laboratory:** | GEL |
| Address: | 2121 N. California Blvd. Ste. 600<br>Walnut Creek, CA 94596 | Address: | 2040 Savage Rd.<br>Charleston, SC 29407 |
| **Contact Name:** | Sarah Von Raesfeld | **Lab Contact Name:** | Jackie Trudell |
| Phone Number: | 925-627-4654 | Phone Number: | 843-769-7388 |
| Fax Number: | 925-627-4501 | Fax Number: | 843-766-1178 |
| E-mail Address: | Sarah.VonRaesfeld@mwhglobal.com | E-mail Address: | jacqueline.trudell@gel.com |

## SAMPLE CONTAINER ORDER FORM

**Date Required:**

**Date Sample Pickup:**

**Ship Containers To:**

Project Site _____ *(enter "X")*
Consultant Office _____ *(enter "X")*
Other Location (specify in comments) _____ *(enter "X")*

**Container Information:**

Trip Blank (VOA only) No *(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 X *(select all applicable)*
Water X *(select all applicable)*
Vapor _____ *(select all applicable)*

Est. Total # of Samples: 175 Est. Total # of EDDs 40

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

| | Water | Soil | Contingent |
|---|---|---|---|
| **Dioxins (1613B)** | **15** | **124** | **0** |
| EPA 8015M (DRO) | -- | -- | -- |
| EPA 8015M (JET FUEL) | -- | -- | -- |
| EPA 8015M (CC) | -- | -- | -- |
| **TCE (8260B)** | **5** | **12** | **0** |
| EPA 8270C SIM (SVOC) | -- | -- | -- |
| EPA 8310 (PAH) | -- | -- | -- |
| **EPA 8082 (PCB)** | **3** | **5** | **0** |
| **Nickel (6020)** | **5** | **10** | **0** |
| **Chromium (6020)** | **5** | **10** | **0** |
| **Silver (6020)** | **5** | **10** | **0** |
| **Cadmium (6020)** | **10** | **35** | **0** |
| **Arsenic (6020)** | **5** | **10** | **0** |
| **% Moisture (D2216)** | **0** | **170** | **0** |
| **Lead (6020)** | **10** | **65** | **0** |
| **Copper (6020)** | **10** | **75** | **0** |
| **Zinc (6020)** | **5** | **20** | **0** |
| **Mercury by 7471A/7470A** | **5** | **25** | **0** |

## LABORATORY REPORTING REQUIREMENTS

**Project TAT:**

Normal: X (10 Business days)
RUSH: 5 (Specify- 24 / 48 / 72HRS)
Other : _____ (Specify # of Days)
Report Due Date:

**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)

**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

Send Original Reports To:

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

## SPECIAL INSTRUCTIONS/LTO NOTES

## CONFIRMATION OF TRANSMITTAL & RECEIPT

**LTO Sent By:**

Name: Sarah Von Raesfeld
Date: 09/02/09

**LTO Received By-**

Name:
Date:

Table of Contents

# Case Narrative

**Case Narrative**
**for**
**Boeing - SSFL (MWH)**
**Work Order: 238234**
**SDG: 238234**

**October 27, 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 October 02, 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:

| Laboratory Identification | Sample Description |
|---|---|
| 238234001 | EBQW2249 |
| 238234002 | HVBF33AS01 |
| 238234003 | HVBF33AS02 |
| 238234004 | HZBS0080AS001 |
| 238234005 | HZBS0080AS002 |
| 238234006 | HZBS0082AS001 |
| 238234007 | HZBS0082AS002 |
| 238234008 | HZBS0084AS001 |
| 238234009 | HZBS0084AS002 |
| 238234010 | HZBS0123AS001 |
| 238234011 | HZBS0123AS002 |
| 238234012 | HZBS0124AS001 |
| 238234013 | HZBS0124AS002 |
| 238234014 | HZBS0175S001 |
| 238234015 | HZBS0175S002 |
| 238234016 | HZBS0177S001 |
| 238234017 | HZBS0177S002 |
| 238234018 | HZBS0180S001 |
| 238234019 | HZBS0180S002 |

**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, General Chemistry, Metals, Perchlorates by LCMSMS, Percent Moisture and Dioxins (Cape Fear Analytical).

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

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 27 October 2009**

| State | Certification |
|---|---|
| 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: 238234


Prepared by

MEC$^X$, 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: | 238234 |
| Project Manager: | Dixie Hambrick |
| Matrix: | water/soil |
| QC Level: | V/IV |
| No. of Samples: | 19 |
| No. of Reanalyses/Dilutions: | 0 |
| Laboratory: | Gel |

**Table 1. Sample Identification**

| *Sample Name* | *Lab Sample Name* | *Sub-Lab Sample Name* | *Matrix* | *Collection* | *Method* |
|---|---|---|---|---|---|
| EBQW2249 | 238234001 | 1090001 | Water | 10/1/2009 3:30:00 PM | 1613B, 6010B, 6020, 7470A, 8015B, 8082, 8270C |
| HVBF33AS01 | 238234002 | 1086007 | Soil | 10/1/2009 10:18:00 AM | 1613B, 8015B, 8082, 8270C |
| HVBF33AS02 | 238234003 | 1086008 | Soil | 10/1/2009 10:40:00 AM | 1613B, 8015B, 8082, 8270C |
| HZBS0080AS001 | 238234004 | N/A | Soil | 10/1/2009 2:35:00 PM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0080AS002 | 238234005 | N/A | Soil | 10/1/2009 2:45:00 PM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0082AS001 | 238234006 | N/A | Soil | 10/1/2009 8:30:00 AM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0082AS002 | 238234007 | N/A | Soil | 10/1/2009 9:05:00 AM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0084AS001 | 238234008 | N/A | Soil | 10/1/2009 7:50:00 AM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0084AS002 | 238234009 | N/A | Soil | 10/1/2009 8:15:00 AM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0123AS001 | 238234010 | N/A | Soil | 10/1/2009 1:15:00 PM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0123AS002 | 238234011 | N/A | Soil | 10/1/2009 1:30:00 PM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | 8082, 8270C |
| HZBS0124AS001 | 238234012 | N/A | Soil | 10/1/2009 11:00:00 AM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C SIM |
| HZBS0124AS002 | 238234013 | N/A | Soil | 10/1/2009 12:30:00 PM | 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0175S001 | 238234014 | 1086001 | Soil | 10/1/2009 1:50:00 PM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0175S002 | 238234015 | 1086002 | Soil | 10/1/2009 2:10:00 PM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0177S001 | 238234016 | 1086003 | Soil | 10/1/2009 3:00:00 PM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0177S002 | 238234017 | 1086004 | Soil | 10/1/2009 3:15:00 PM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0180S001 | 238234018 | 1086005 | Soil | 10/1/2009 9:30:00 AM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |
| HZBS0180S002 | 238234019 | 1086006 | Soil | 10/1/2009 10:00:00 AM | 1613B, 314.0, 6010B, 6020, 6850, 7471A, 8015B, 8082, 8270C |

## II. Sample Management

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

## Data Qualifier Reference Table

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

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

## Qualification Code Reference Table

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

## Qualification Code Reference Table Cont.

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

# III. Method Analyses

## A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

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

- Holding Times: Extraction and analytical holding times were met. The samples were extracted and analyzed within one year of collection.

- Instrument Performance: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: The aqueous method blank had detects below the PQL for 12 target compounds; however, there were no target compounds detected above the EDL in the associated sample. The soil method blank had detects below the PQL for all but five of the target compounds. Detects less than the reporting limit or less than 5× the method blank detect for 1,2,3,4,6,7,8-HpCDF and OCDD were qualified as nondetected, "U," at the EDL or the level of contamination. Detected results for all totals except total TCDD were qualified as estimated, "J," due to detects in the soil method blank.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613. The RPDs were within the laboratory-established control limits.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank associated with the samples in this SDG; however, the sample was not analyzed for dioxins. EBQW2249 was identified as the equipment rinsate associated with the samples in this SDG. There were no detects above the EDL in this sample.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: Internal standard recoveries are not routinely evaluated at a Level V validation; however, the recoveries were reported on the sample result summaries. The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.

- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The laboratory did not perform a confirmation analysis for 2,3,7,8-TCDF in HZBS0180S002; therefore, this detect was qualified as estimated, "J." The laboratory performed confirmation analyses for all remaining 2,3,7,8-TCDF detects. As the confirmation results yielded results similar to the original results, the confirmation results were rejected, "R," in favor of the original results.

- Compound Quantification and Reported Detection Limits: Review is not applicable at a Level V validation. (EMPCs) were identified in the sample of this SDG, as denoted by the laboratory "K," code. For individual isomers identified as EMPCs, the results were qualified as estimated nondetects, "UJ." Totals reported as EMPCs were qualified as estimated, "J," as only a portion of the total was identified as an EMPC. The laboratory calculated and reported compound-specific detection limits. Any detect below the laboratory lower calibration level was qualified as estimated, "J." Nondetects are valid to the estimated detection limit (EDL).

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

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

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

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.

- Tuning: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: Thallium and antimony were detected in bracketing CCBs at 0.315 and 3.33 µg/L, respectively; therefore, thallium detected in EBQW2249 was qualified as nondetected, "U," at the reporting limit and antimony detected in HZBS0080AS002, HZBS0082AS002, HZBS0084AS001, HZBS0084AS002, HZBS0123AS001, HZBS0123AS002, HZBS0124AS001, HZBS0124AS002, HZBS0175AS002, HZBS0177AS002, HZBS0180AS001, and HZBS0180AS002. Mercury was reported in a bracketing CCB at -0.117 µg/L; therefore, mercury in the soil samples was qualified as estimated, "J," for detects and, "UJ," for nondetects. Method blanks and CCBs had no other applicable detects.

- Interference Check Samples: Review is not applicable at a Level V validation; however, the reviewer noted that antimony was reported and boron was detected in the ICSA at -7.22 and 24.2 µg/L, respectively. Antimony and boron detected in the soil samples were qualified as estimated, "J," and nondetected antimony in the soil samples was qualified as estimated, "UJ."

- Blank Spikes and Laboratory Control Samples: Mercury was recovered above the control limit in the aqueous LCS; however, mercury was not detected in the associated sample. All remaining recoveries and all aqueous RPDs were within laboratory-established QC limits.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on HZBS0080AS001 for the 6010B analytes and mercury only. The RPDs were within the method-established control limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZBS0080AS001 for the 6010B analytes and mercury only. All recoveries and RPDs were within laboratory-established QC limits.

- Serial Dilution: Serial dilution analyses were performed on EBQW2249 with acceptable results. Serial dilution analyses were also performed on HZBS0080AS001 for the 6010B analytes and mercury only. The %Ds were within the method-established control limits.

- Internal Standards Performance: Review is not applicable at a Level V validation.

- Sample Result Verification: Review is not applicable at a Level V validation. As the samples in this SDG were validated at Level V, the QC information necessary to make an absolute determination of bias in the samples was not reviewed; therefore, when qualifications were applied, no bias was assigned. Vanadium in the soil samples was analyzed at a 10× dilution in order to report the analyte within the linear range of the instrument. All remaining soil ICP-MS analytes were reported from the laboratory's standard 2× dilution for soils. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2249 was the equipment rinsate associated with the samples in this SDG. There were no detects in either sample.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

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

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

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

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.

- GC/MS Tuning: Review is not applicable at a Level V validation.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: Bis(2-ethylhexyl)phthalate was detected in the aqueous method blank at 0.161 µg/L; therefore, bis(2-ethylhexyl)phthalate detected in EBQW2249 was qualified as nondetected, "U," at the reporting limit. 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 HVBF33AS02. The RPD for benzo(g,h,i)perylene exceeded the control limit. All recoveries and all remaining RPDs were within laboratory-established QC limits.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2248 was the equipment rinsate associated with the samples in this SDG. There were no reportable detects in either 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 PAH compounds and added phthalates by Method 8270C low-level.

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

- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.

- System performance: System performance is not evaluated at a Level V validation.

## D. EPA METHODS 314.0 and 6850—Perchlorate

Reviewed By: P. Meeks, E. Wessling
Date Reviewed: November 2, 2009, October 29, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC$^X$ Data Validation Procedure for Metals (DVP-20, Rev. 0), EPA Methods 314.0 and 6850*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: The analytical holding time, 28 days, was met.

- Calibration: Review is not applicable at a Level V validation for the 314.0 analysis. Calibration for method 6850 data was reviewed and found to be acceptable.

- Blanks: Method blanks and CCBs had no detects. Method 6850 data had no false negatives or false positives.

- Blank Spikes and Laboratory Control Samples: The recoveries were within the 6850 and 314.0 method-established QC limits of 80-120% and 85-115%, respectively. The recovery for the 6850 LCS was within the laboratory-established control limit.

- Laboratory Duplicates: A laboratory duplicate analysis was performed on HZBS0082AS002 and HZBS0175S002 for perchlorate by 314.0. The RPDs were within the method-established control limit of ≤15%.

- Matrix Spike/Matrix Spike Duplicate: A matrix spike analysis was performed on HZBS0082AS002 and HZBS0175S002 for perchlorate analyzed by 314.0, the recoveries were within the method-established control limit of 80-120%. MS/MSD analyses were performed on HZBS0080AS002 for perchlorate analyzed by 6850. Recoveries and RPDs were within method-established QC limits of 80-120% and ≤20%, respectively.

- Sample Result Verification: The sample results reported on the sample result summary were verified against the raw data. Sample results for the 6850 method were recalculated by the reviewer and found to be acceptable. No transcription errors or calculation errors were noted. Reported nondetects are valid to the reporting limit.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2249 was the equipment rinsate associated with the samples in this SDG. Perchlorate was not detected by 314.0 in either sample.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

## E. EPA METHOD 8082—PCBs

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC$^X$ 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).

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

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: The method blanks had no target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.

- Surrogate Recovery: Recoveries were within laboratory-established QC limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a sample in this SDG. Method accuracy was evaluated based on LCS results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2249 was the equipment rinsate associated with the samples in this SDG. There were no detects above the MDL in either sample.

- Field Duplicates: There were no field duplicate samples identified for this SDG.

- Compound Identification: Review is not applicable at a Level V validation. The laboratory analyzed for Aroclors by Method 8082. Although not generally reviewed at Level V validation, the laboratory flagged Aroclor-1260 in HZBS0123AS001 as having an intercolumn %D greater than 40%. The result was qualified as estimated, "J."

- 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.

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

Reviewed By: P. Meeks
Date Reviewed: November 2, 2009

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

- Holding Times: Extraction and analytical holding times were met. The aqueous sample was extracted within seven days of collection and the soil samples were extracted within 14 days of collection. All samples were analyzed within 40 days of extraction.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: Method blanks had no target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Recoveries and the aqueous RPD 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 HVBF33AS01. Recoveries and the RPD were within laboratory-established QC limits.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: FBQW2239 (235913) was the field blank and EBQW2249 was the equipment rinsate associated with the samples in this SDG. FBQW2239 was not analyzed by 8015 and there were no detects above the MDL in EBQW2249.

- 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: 238234

## *Analysis Method 1613B*

**Sample Name** EBQW2249 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 1090001 **Sample Date:** 10/1/2009 3:30:00 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 | 4.73 | 25.9 | 4.73 | pg/L | U | U | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 2.47 | 25.9 | 2.47 | pg/L | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 4.96 | 25.9 | 4.96 | pg/L | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 2.38 | 25.9 | 2.38 | pg/L | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 1.46 | 25.9 | 1.46 | pg/L | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 2.61 | 25.9 | 2.61 | pg/L | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 1.46 | 25.9 | 1.46 | pg/L | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 2.61 | 25.9 | 2.61 | pg/L | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 2.53 | 25.9 | 2.53 | pg/L | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 1.56 | 25.9 | 1.56 | pg/L | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 1.15 | 25.9 | 1.15 | pg/L | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 1.47 | 25.9 | 1.47 | pg/L | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 1.19 | 25.9 | 1.19 | pg/L | U | U | |
| 2,3,7,8-TCDD | 1746016 | 1.79 | 5.18 | 1.79 | pg/L | U | U | |
| 2,3,7,8-TCDF | 51207319 | 2.16 | 5.18 | 2.16 | pg/L | U | U | |
| OCDD | 3268879 | 10.9 | 51.8 | 10.9 | pg/L | U | U | |
| OCDF | 39001020 | 10.7 | 51.8 | 10.7 | pg/L | U | U | |
| Total HpCDD | 37871004 | 4.73 | 25.9 | 4.73 | pg/L | U | U | |
| Total HpCDF | 38998753 | 2.47 | 25.9 | 2.47 | pg/L | U | U | |
| Total HxCDD | 34465468 | 2.38 | 25.9 | 2.38 | pg/L | U | U | |
| Total HxCDF | 55684941 | 1.46 | 25.9 | 1.46 | pg/L | U | U | |
| Total PeCDD | 36088229 | 1.56 | 25.9 | 1.56 | pg/L | U | U | |
| Total PeCDF | 30402154 | 1.15 | 25.9 | 1.15 | pg/L | U | U | |
| Total TCDD | 41903575 | 1.79 | 5.18 | 1.79 | pg/L | U | U | |
| Total TCDFs | 55722275 | 2.16 | 5.18 | 2.16 | pg/L | U | U | |

## *Analysis Method 1613B*

**Sample Name** HVBF33AS01 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1086007 **Sample Date:** 10/1/2009 10:18:00 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 | 4.47 | 4.47 | 4.47 | pg/g | JK | UJ | *III result changed from 2.19 and EDL from 0.515 |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 4.47 | 4.47 | 4.47 | pg/g | JK | UJ | *III result changed from 0.715 and EDL from 0.247 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.469 | 4.47 | 0.469 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.299 | 4.47 | 0.299 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.188 | 4.47 | 0.188 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.297 | 4.47 | 0.297 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.193 | 4.47 | 0.193 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.313 | 4.47 | 0.313 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.299 | 4.47 | 0.299 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.193 | 4.47 | 0.193 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.184 | 4.47 | 0.174 | pg/g | J | J | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.202 | 4.47 | 0.202 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.176 | 4.47 | 0.176 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.181 | 0.894 | 0.181 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.334 | 0.894 | 0.146 | pg/g | J | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.356 | 0.894 | 0.306 | pg/g | J | J | |
| OCDD | 3268879 | 15.8 | 8.94 | 1.15 | pg/g | | | |
| OCDF | 39001020 | 1.01 | 8.94 | 1.01 | pg/g | U | U | |
| Total HpCDD | 37871004 | 5.76 | | 0.515 | pg/g | | J | B, *III |
| Total HpCDF | 38998753 | 1.23 | | 0.247 | pg/g | | J | B, *III |
| Total HxCDD | 34465468 | 0.96 | | 0.297 | pg/g | | J | B |
| Total HxCDF | 55684941 | 0.937 | | 0.188 | pg/g | | J | B |
| Total PeCDD | 36088229 | 0.193 | | 0.193 | pg/g | U | U | |
| Total PeCDF | 30402154 | 1.01 | | 0.116 | pg/g | | J | B |
| Total TCDD | 41903575 | 0.249 | | 0.181 | pg/g | | | |
| Total TCDFs | 55722275 | 0.356 | | 0.306 | pg/g | B | J | B |

## *Analysis Method 1613B*

**Sample Name** HVBF33AS02 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1086008 **Sample Date:** 10/1/2009 10:40:00 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 | 0.519 | 4.83 | 0.519 | pg/g | U | U | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.276 | 4.83 | 0.276 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.531 | 4.83 | 0.531 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.251 | 4.83 | 0.251 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.181 | 4.83 | 0.181 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.286 | 4.83 | 0.286 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.181 | 4.83 | 0.181 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.282 | 4.83 | 0.282 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.284 | 4.83 | 0.284 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.17 | 4.83 | 0.17 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.14 | 4.83 | 0.14 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.195 | 4.83 | 0.195 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.143 | 4.83 | 0.143 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.237 | 0.965 | 0.237 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.359 | 0.965 | 0.116 | pg/g | JK | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.278 | 0.965 | 0.253 | pg/g | J | J | |
| OCDD | 3268879 | 1.17 | 9.65 | 1.17 | pg/g | U | U | |
| OCDF | 39001020 | 1.05 | 9.65 | 1.05 | pg/g | U | U | |
| Total HpCDD | 37871004 | 0.519 | | 0.519 | pg/g | U | U | |
| Total HpCDF | 38998753 | 0.276 | | 0.276 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.251 | | 0.251 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.181 | | 0.181 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.17 | | 0.17 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.14 | | 0.14 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.237 | | 0.237 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.6 | | 0.253 | pg/g | B | J | B |

## *Analysis Method 1613B*

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1086001 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 2.42 | 4.2 | 0.504 | pg/g | J | J | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 4.2 | 4.2 | 4.2 | pg/g | J | U | B, result changed from 0.547 and EDL from 0.243 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.465 | 4.2 | 0.465 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.242 | 4.2 | 0.242 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.161 | 4.2 | 0.161 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.27 | 4.2 | 0.27 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.18 | 4.2 | 0.18 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.269 | 4.2 | 0.269 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.274 | 4.2 | 0.274 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.18 | 4.2 | 0.18 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 4.2 | 4.2 | 4.2 | pg/g | JK | UJ | *III result changed from 0.306 and EDL from 0.183 |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.188 | 4.2 | 0.188 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.19 | 4.2 | 0.19 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.215 | 0.839 | 0.215 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.341 | 0.839 | 0.165 | pg/g | J | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.306 | 0.839 | 0.306 | pg/g | U | U | |
| OCDD | 3268879 | 18.9 | 8.39 | 1.54 | pg/g | | | |
| OCDF | 39001020 | 1.16 | 8.39 | 1.16 | pg/g | U | U | |
| Total HpCDD | 37871004 | 6.33 | | 0.504 | pg/g | | J | B |
| Total HpCDF | 38998753 | 1.33 | | 0.243 | pg/g | | J | B |
| Total HxCDD | 34465468 | 0.819 | | 0.242 | pg/g | | J | B |
| Total HxCDF | 55684941 | 0.846 | | 0.161 | pg/g | | J | B |
| Total PeCDD | 36088229 | 0.18 | | 0.18 | pg/g | U | U | |
| Total PeCDF | 30402154 | 1.28 | | 0.116 | pg/g | | J | B, *III |
| Total TCDD | 41903575 | 0.215 | | 0.215 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.306 | | 0.306 | pg/g | U | U | |

*Analysis Method 1613B*

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1086002 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1,2,3,4,6,7,8-HpCDD | 35822469 | 0.443 | 4.26 | 0.443 | pg/g | U | U | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.198 | 4.26 | 0.198 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.401 | 4.26 | 0.401 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.246 | 4.26 | 0.246 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.156 | 4.26 | 0.156 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.264 | 4.26 | 0.264 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.155 | 4.26 | 0.155 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.268 | 4.26 | 0.268 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.242 | 4.26 | 0.242 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.171 | 4.26 | 0.171 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.124 | 4.26 | 0.124 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.159 | 4.26 | 0.159 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.117 | 4.26 | 0.117 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.181 | 0.853 | 0.181 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.278 | 0.853 | 0.129 | pg/g | J | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.307 | 0.853 | 0.225 | pg/g | J | J | |
| OCDD | 3268879 | 8.53 | 8.53 | 8.53 | pg/g | J | U | B, result changed from 2.55 and EDL from 1.03 |
| OCDF | 39001020 | 0.941 | 8.53 | 0.941 | pg/g | U | U | |
| Total HpCDD | 37871004 | 0.631 | | 0.443 | pg/g | | J | B |
| Total HpCDF | 38998753 | 0.198 | | 0.198 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.246 | | 0.246 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.155 | | 0.155 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.171 | | 0.171 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.121 | | 0.105 | pg/g | | J | B |
| Total TCDD | 41903575 | 0.181 | | 0.181 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.307 | | 0.225 | pg/g | B | J | B |

*Analysis Method 1613B*

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1086003 **Sample Date:** 10/1/2009 3:00:00 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 | 4.39 | 4.08 | 0.608 | pg/g | | | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 4.08 | 4.08 | 4.08 | pg/g | J | U | B, result changed from 0.874 and EDL from 0.265 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.485 | 4.08 | 0.485 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.284 | 4.08 | 0.284 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.168 | 4.08 | 0.168 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.314 | 4.08 | 0.314 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 4.08 | 4.08 | 4.08 | pg/g | JK | UJ | *III, result changed from 0.201 and EDL from 0.19 |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.314 | 4.08 | 0.314 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.291 | 4.08 | 0.291 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 4.08 | 4.08 | 4.08 | pg/g | JK | UJ | *III,result changed from 0.268 and EDL from 0.206 |
| 1,2,3,7,8-PeCDF | 57117416 | 4.08 | 4.08 | 4.08 | pg/g | JK | UJ | *III result changed from 0.343 and EDL from 0.25 |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.203 | 4.08 | 0.203 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 4.08 | 4.08 | 4.08 | pg/g | JK | UJ | *III result changed from 0.291 and EDL from 0.247 |
| 2,3,7,8-TCDD | 1746016 | 0.199 | 0.817 | 0.199 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.817 | 0.817 | 0.817 | pg/g | JK | UJ | *III result changed from 0.472 and EDL from 0.337 |
| 2,3,7,8-TCDF | 51207319 | 0.485 | 0.817 | 0.145 | pg/g | JK | R | D |
| OCDD | 3268879 | 37.3 | 8.17 | 1.24 | pg/g | | | |
| OCDF | 39001020 | 2 | 8.17 | 1 | pg/g | J | J | |
| Total HpCDD | 37871004 | 11.2 | | 0.608 | pg/g | | J | B |
| Total HpCDF | 38998753 | 1.65 | | 0.265 | pg/g | | J | B |
| Total HxCDD | 34465468 | 1.65 | | 0.284 | pg/g | | J | B |

*Analysis Method 1613B*

| | | | | | | |
|---|---|---|---|---|---|---|
| Total HxCDF | 55684941 | 2 | 0.168 pg/g | | J | B, *III |
| Total PeCDD | 36088229 | 0.536 | 0.206 pg/g | | J | B, *III |
| Total PeCDF | 30402154 | 2.54 | 0.116 pg/g | | J | B, *III |
| Total TCDD | 41903575 | 0.361 | 0.199 pg/g | | | |
| Total TCDFs | 55722275 | 1.68 | 0.337 pg/g | B | J | B, *III |

*Analysis Method 1613B*

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1086004 **Sample Date:** 10/1/2009 3:15:00 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 | 0.449 | 3.66 | 0.449 | pg/g | U | U | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.192 | 3.66 | 0.192 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.367 | 3.66 | 0.367 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.209 | 3.66 | 0.209 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.143 | 3.66 | 0.143 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.235 | 3.66 | 0.235 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.148 | 3.66 | 0.148 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.232 | 3.66 | 0.232 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.224 | 3.66 | 0.224 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.138 | 3.66 | 0.138 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.105 | 3.66 | 0.105 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.148 | 3.66 | 0.148 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.102 | 3.66 | 0.102 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.173 | 0.731 | 0.173 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.731 | 0.731 | 0.731 | pg/g | JK | UJ | *III result changed from 0.284 and EDL from 0.192 |
| 2,3,7,8-TCDF | 51207319 | 0.328 | 0.731 | 0.104 | pg/g | JK | R | D |
| OCDD | 3268879 | 7.31 | 7.31 | 7.31 | pg/g | JK | UJ | *III result changed from 1.13 and EDL from 0.947 |
| OCDF | 39001020 | 0.943 | 7.31 | 0.943 | pg/g | U | U | |
| Total HpCDD | 37871004 | 0.449 | | 0.449 | pg/g | U | U | |
| Total HpCDF | 38998753 | 0.192 | | 0.192 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.209 | | 0.209 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.143 | | 0.143 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.138 | | 0.138 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.102 | | 0.102 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.173 | | 0.173 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.526 | | 0.192 | pg/g | B | J | B, *III |

## *Analysis Method 1613B*

**Sample Name** HZBS0180S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1086005 **Sample Date:** 10/1/2009 9:30:00 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 | 1.93 | 4.48 | 0.544 | pg/g | J | J | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 4.48 | 4.48 | 4.48 | pg/g | J | U | B, result changed from 0.431 and EDL from 0.228 |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.484 | 4.48 | 0.484 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.267 | 4.48 | 0.267 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.161 | 4.48 | 0.161 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.305 | 4.48 | 0.305 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.181 | 4.48 | 0.181 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.3 | 4.48 | 0.3 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.267 | 4.48 | 0.267 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.201 | 4.48 | 0.201 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.159 | 4.48 | 0.159 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.179 | 4.48 | 0.179 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 4.48 | 4.48 | 4.48 | pg/g | JK | UJ | *III result changed from 0.213 and EDL from 0.152 |
| 2,3,7,8-TCDD | 1746016 | 0.208 | 0.897 | 0.208 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.386 | 0.897 | 0.137 | pg/g | J | R | D |
| 2,3,7,8-TCDF | 51207319 | 0.335 | 0.897 | 0.305 | pg/g | J | J | |
| OCDD | 3268879 | 13.8 | 8.97 | 1.09 | pg/g | | | |
| OCDF | 39001020 | 1.24 | 8.97 | 1.24 | pg/g | U | U | |
| Total HpCDD | 37871004 | 5.24 | | 0.544 | pg/g | | J | B |
| Total HpCDF | 38998753 | 0.431 | | 0.228 | pg/g | | J | B |
| Total HxCDD | 34465468 | 0.773 | | 0.267 | pg/g | | J | B |
| Total HxCDF | 55684941 | 0.353 | | 0.161 | pg/g | | J | B |
| Total PeCDD | 36088229 | 0.201 | | 0.201 | pg/g | U | U | |
| Total PeCDF | 30402154 | 1.24 | | 0.109 | pg/g | | J | B, *III |
| Total TCDD | 41903575 | 0.208 | | 0.208 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.335 | | 0.305 | pg/g | B | J | B |

*Analysis Method 1613B*

**Sample Name** HZBS0180S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 1086006 **Sample Date:** 10/1/2009 10:00:00 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 | 0.561 | 4.4 | 0.561 | pg/g | U | U | |
| 1,2,3,4,6,7,8-HpCDF | 67562394 | 0.253 | 4.4 | 0.253 | pg/g | U | U | |
| 1,2,3,4,7,8,9-HpCDF | 55673897 | 0.51 | 4.4 | 0.51 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDD | 39227286 | 0.264 | 4.4 | 0.264 | pg/g | U | U | |
| 1,2,3,4,7,8-HxCDF | 70648269 | 0.175 | 4.4 | 0.175 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDD | 57653857 | 0.299 | 4.4 | 0.299 | pg/g | U | U | |
| 1,2,3,6,7,8-HxCDF | 57117449 | 0.171 | 4.4 | 0.171 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDD | 19408743 | 0.296 | 4.4 | 0.296 | pg/g | U | U | |
| 1,2,3,7,8,9-HxCDF | 72918219 | 0.266 | 4.4 | 0.266 | pg/g | U | U | |
| 1,2,3,7,8-PeCDD | 40321764 | 0.19 | 4.4 | 0.19 | pg/g | U | U | |
| 1,2,3,7,8-PeCDF | 57117416 | 0.131 | 4.4 | 0.131 | pg/g | U | U | |
| 2,3,4,6,7,8-HxCDF | 60851345 | 0.183 | 4.4 | 0.183 | pg/g | U | U | |
| 2,3,4,7,8-PeCDF | 57117314 | 0.143 | 4.4 | 0.143 | pg/g | U | U | |
| 2,3,7,8-TCDD | 1746016 | 0.211 | 0.88 | 0.211 | pg/g | U | U | |
| 2,3,7,8-TCDF | 51207319 | 0.88 | 0.88 | 0.88 | pg/g | JK | UJ | *III result changed from 0.236 and EDL from 0.225 |
| OCDD | 3268879 | 1.22 | 8.8 | 1.22 | pg/g | U | U | |
| OCDF | 39001020 | 1.03 | 8.8 | 1.03 | pg/g | U | U | |
| Total HpCDD | 37871004 | 0.561 | | 0.561 | pg/g | U | U | |
| Total HpCDF | 38998753 | 0.253 | | 0.253 | pg/g | U | U | |
| Total HxCDD | 34465468 | 0.264 | | 0.264 | pg/g | U | U | |
| Total HxCDF | 55684941 | 0.171 | | 0.171 | pg/g | U | U | |
| Total PeCDD | 36088229 | 0.19 | | 0.19 | pg/g | U | U | |
| Total PeCDF | 30402154 | 0.131 | | 0.131 | pg/g | U | U | |
| Total TCDD | 41903575 | 0.211 | | 0.211 | pg/g | U | U | |
| Total TCDFs | 55722275 | 0.236 | | 0.225 | pg/g | B | J | B, *III |

## *Analysis Method 314.0-DI WET*

**Sample Name** HZBS0080AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234004 **Sample Date:** 10/1/2009 2:35:00 PM **Validation Level:** V

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

**Sample Name** HZBS0080AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234005 **Sample Date:** 10/1/2009 2:45:00 PM **Validation Level:** V

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

**Sample Name** HZBS0082AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234006 **Sample Date:** 10/1/2009 8:30:00 AM **Validation Level:** V

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

**Sample Name** HZBS0082AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234007 **Sample Date:** 10/1/2009 9:05:00 AM **Validation Level:** V

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

**Sample Name** HZBS0084AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234008 **Sample Date:** 10/1/2009 7:50:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 20 | 20 | | 5 ug/L | U | U | |

**Sample Name** HZBS0084AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234009 **Sample Date:** 10/1/2009 8:15:00 AM **Validation Level:** V

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

**Sample Name** HZBS0123AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234010 **Sample Date:** 10/1/2009 1:15:00 PM **Validation Level:** V

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

## *Analysis Method 314.0-DI WET*

**Sample Name** HZBS0123AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234011 **Sample Date:** 10/1/2009 1:30:00 PM **Validation Level:** V

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

**Sample Name** HZBS0124AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234012 **Sample Date:** 10/1/2009 11:00:00 AM **Validation Level:** V

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

**Sample Name** HZBS0124AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234013 **Sample Date:** 10/1/2009 12:30:00 PM **Validation Level:** V

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

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234014 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

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

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234015 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

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

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234016 **Sample Date:** 10/1/2009 3:00:00 PM **Validation Level:** V

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

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234017 **Sample Date:** 10/1/2009 3:15:00 PM **Validation Level:** V

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

*Analysis Method 314.0-DI WET*

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | HZBS0180S001 | **Matrix Type:** | Soil | **Result Type:** | Primary Result |
| **Lab Sample Name:** | 238234018 | **Sample Date:** | 10/1/2009 9:30:00 AM | **Validation Level:** | V |

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

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | HZBS0180S002 | **Matrix Type:** | Soil | **Result Type:** | Primary Result |
| **Lab Sample Name:** | 238234019 | **Sample Date:** | 10/1/2009 10:00:00 AM | **Validation Level:** | V |

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

## *Analysis Method 6010B*

**Sample Name** EBQW2249 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238234001 **Sample Date:** 10/1/2009 3:30:00 PM **Validation Level:** V

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

**Sample Name** HZBS0080AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234004 **Sample Date:** 10/1/2009 2:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 11300 | 19.8 | | 6.74 mg/kg | | | |
| Antimony | 7440360 | 1.49 | 0.991 | | 0.327 mg/kg | | J | I |
| Boron | 7440428 | 3.52 | 4.95 | | 0.991 mg/kg | J | J | I |

**Sample Name** HZBS0080AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234005 **Sample Date:** 10/1/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 14700 | 20.5 | | 6.97 mg/kg | | | |
| Antimony | 7440360 | 1.68 | 1.68 | | 1.68 mg/kg | | UJ | B,I, RL changed from 1.02 and MDL from 0.338 |
| Boron | 7440428 | 3.22 | 5.12 | | 1.02 mg/kg | J | J | I |

**Sample Name** HZBS0082AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234006 **Sample Date:** 10/1/2009 8:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 12400 | 20.7 | | 7.02 mg/kg | | | |
| Antimony | 7440360 | 1.83 | 1.03 | | 0.341 mg/kg | | J | I |
| Boron | 7440428 | 3.57 | 5.16 | | 1.03 mg/kg | J | J | I |

*Analysis Method 6010B*

**Sample Name** HZBS0082AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234007 **Sample Date:** 10/1/2009 9:05:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 13200 | 20.3 | 6.89 | mg/kg | | | |
| Antimony | 7440360 | 1.62 | 1.62 | 1.62 | mg/kg | | UJ | B,I, RL changed from 1.01 and MDL from 0.334 |
| Boron | 7440428 | 2.65 | 5.07 | 1.01 | mg/kg | J | J | I |

**Sample Name** HZBS0084AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234008 **Sample Date:** 10/1/2009 7:50:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 10900 | 19.8 | 6.73 | mg/kg | | | |
| Antimony | 7440360 | 1.54 | 1.54 | 1.54 | mg/kg | | UJ | B,I, RL changed from 0.99 and MDL from 0.327 |
| Boron | 7440428 | 2.81 | 4.95 | 0.99 | mg/kg | J | J | I |

**Sample Name** HZBS0084AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234009 **Sample Date:** 10/1/2009 8:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 14300 | 20 | 6.8 | mg/kg | | | |
| Antimony | 7440360 | 1.5 | 1.5 | 1.5 | mg/kg | | UJ | B,I, RL changed from 1 and MDL from 0.33 |
| Boron | 7440428 | 2.43 | 5 | 1 | mg/kg | J | J | I |

**Sample Name** HZBS0123AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234010 **Sample Date:** 10/1/2009 1:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 9320 | 20 | 6.81 | mg/kg | | | |
| Antimony | 7440360 | 1.54 | 1.54 | 1.54 | mg/kg | | UJ | B,I, RL changed from 1 and MDL from 0.33 |
| Boron | 7440428 | 4.19 | 5 | 1 | mg/kg | J | J | I |

*Analysis Method 6010B*

**Sample Name** HZBS0123AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234011 **Sample Date:** 10/1/2009 1:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 10600 | 20.2 | 6.87 | mg/kg | | | |
| Antimony | 7440360 | 1.52 | 1.52 | 1.52 | mg/kg | | UJ | B,I, RL changed from 1.01 and MDL from 0.334 |
| Boron | 7440428 | 2.69 | 5.05 | 1.01 | mg/kg | J | J | I |

**Sample Name** HZBS0124AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234012 **Sample Date:** 10/1/2009 11:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 10500 | 20.4 | 6.93 | mg/kg | | | |
| Antimony | 7440360 | 1.36 | 1.36 | 1.36 | mg/kg | | UJ | B,I, RL changed from 1.02 and MDL from 0.336 |
| Boron | 7440428 | 2.98 | 5.1 | 1.02 | mg/kg | J | J | I |

**Sample Name** HZBS0124AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234013 **Sample Date:** 10/1/2009 12:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 14100 | 20.1 | 6.84 | mg/kg | | | |
| Antimony | 7440360 | 1.49 | 1.49 | 1.49 | mg/kg | | UJ | B,I, RL changed from 1.01 and MDL from 0.332 |
| Boron | 7440428 | 3 | 5.03 | 1.01 | mg/kg | J | J | I |

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234014 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 10900 | 20.1 | 6.82 | mg/kg | | | |
| Antimony | 7440360 | 1.71 | 1 | 0.331 | mg/kg | | J | I |
| Boron | 7440428 | 4.11 | 5.01 | 1 | mg/kg | J | J | I |

## *Analysis Method 6010B*

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234015 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 9570 | 20 | 6.79 | mg/kg | | | |
| Antimony | 7440360 | 1.21 | 1.21 | 1.21 | mg/kg | | UJ | B,I, RL changed from 0.999 and MDL from 0.33 |
| Boron | 7440428 | 2.19 | 4.99 | 0.999 | mg/kg | J | J | I |

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234016 **Sample Date:** 10/1/2009 3:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 10400 | 19.7 | 6.7 | mg/kg | | | |
| Antimony | 7440360 | 1.4 | 1.4 | 1.4 | mg/kg | | UJ | B,I, RL changed from 0.985 and MDL from 0.325 |
| Boron | 7440428 | 3.44 | 4.93 | 0.985 | mg/kg | J | J | I |

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234017 **Sample Date:** 10/1/2009 3:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 13000 | 20.3 | 6.92 | mg/kg | | | |
| Antimony | 7440360 | 1.71 | 1.02 | 0.336 | mg/kg | | J | I |
| Boron | 7440428 | 2.95 | 5.09 | 1.02 | mg/kg | J | J | I |

**Sample Name** HZBS0180S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234018 **Sample Date:** 10/1/2009 9:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 9260 | 20.1 | 6.83 | mg/kg | | | |
| Antimony | 7440360 | 1.26 | 1.26 | 1.26 | mg/kg | | UJ | B,I, RL changed from 1 and MDL from 0.332 |
| Boron | 7440428 | 3.53 | 5.02 | 1 | mg/kg | J | J | I |

*Analysis Method 6010B*

**Sample Name** HZBS0180S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234019 **Sample Date:** 10/1/2009 10:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 7429905 | 12000 | 20.8 | 7.09 | mg/kg | | | |
| Antimony | 7440360 | 1.45 | 1.45 | 1.45 | mg/kg | | UJ | B,I, RL changed from 1.04 and MDL from 0.344 |
| Boron | 7440428 | 2.94 | 5.21 | 1.04 | mg/kg | J | J | I |

*Analysis Method 6020*

**Sample Name** EBQW2249 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238234001 **Sample Date:** 10/1/2009 3:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 1.6 | 5 | 1.6 | ug/L | U | U | |
| Barium | 7440393 | 0.6 | 2 | 0.6 | ug/L | U | U | |
| Beryllium | 7440417 | 0.1 | 0.5 | 0.1 | ug/L | U | U | |
| Cadmium | 7440439 | 0.11 | 1 | 0.11 | ug/L | U | U | |
| Chromium | 7440473 | 2 | 10 | 2 | ug/L | U | U | |
| Cobalt | 7440484 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Copper | 7440508 | 0.33 | 1 | 0.33 | ug/L | U | U | |
| Lead | 7439921 | 0.5 | 2 | 0.5 | ug/L | U | U | |
| Molybdenum | 7439987 | 0.167 | 0.5 | 0.167 | ug/L | U | U | |
| Nickel | 7440020 | 0.5 | 2 | 0.5 | ug/L | U | U | |
| Selenium | 7782492 | 1 | 5 | 1 | ug/L | U | U | |
| Silver | 7440224 | 0.2 | 1 | 0.2 | ug/L | U | U | |
| Thallium | 7440280 | 1 | 1 | 1 | ug/L | J | U | B, result changed from 0.404 and MDL from 0.3 |
| Vanadium | 7440622 | 3 | 10 | 3 | ug/L | U | U | |
| Zinc | 7440666 | 3 | 10 | 3 | ug/L | U | U | |

## *Analysis Method 6020*

**Sample Name** HZBS0080AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234004 **Sample Date:** 10/1/2009 2:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.73 | 1.01 | 0.201 | mg/kg | | | |
| Barium | 7440393 | 92.3 | 0.402 | 0.101 | mg/kg | | | |
| Beryllium | 7440417 | 0.819 | 0.101 | 0.0201 | mg/kg | | | |
| Cadmium | 7440439 | 0.234 | 0.201 | 0.0201 | mg/kg | | | |
| Chromium | 7440473 | 21.5 | 0.604 | 0.201 | mg/kg | | | |
| Cobalt | 7440484 | 5.86 | 0.201 | 0.0604 | mg/kg | | | |
| Copper | 7440508 | 10.1 | 0.201 | 0.0664 | mg/kg | | | |
| Lead | 7439921 | 15.4 | 0.402 | 0.101 | mg/kg | | | |
| Molybdenum | 7439987 | 0.441 | 0.201 | 0.0604 | mg/kg | | | |
| Nickel | 7440020 | 13.9 | 0.402 | 0.101 | mg/kg | | | |
| Selenium | 7782492 | 0.503 | 1.01 | 0.503 | mg/kg | U | U | |
| Silver | 7440224 | 0.0751 | 0.201 | 0.0402 | mg/kg | J | J | |
| Thallium | 7440280 | 0.397 | 0.201 | 0.0604 | mg/kg | | | |
| Vanadium | 7440622 | 37.9 | 10.1 | 2.01 | mg/kg | | | |
| Zinc | 7440666 | 58.7 | 2.01 | 0.402 | mg/kg | | | |

**Sample Name** HZBS0080AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234005 **Sample Date:** 10/1/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 6.59 | 1.04 | 0.209 | mg/kg | | | |
| Barium | 7440393 | 73 | 0.417 | 0.104 | mg/kg | | | |
| Beryllium | 7440417 | 0.868 | 0.104 | 0.0209 | mg/kg | | | |
| Cadmium | 7440439 | 0.193 | 0.209 | 0.0209 | mg/kg | J | J | |
| Chromium | 7440473 | 23.1 | 0.626 | 0.209 | mg/kg | | | |
| Cobalt | 7440484 | 4.73 | 0.209 | 0.0626 | mg/kg | | | |
| Copper | 7440508 | 11.9 | 0.209 | 0.0689 | mg/kg | | | |
| Lead | 7439921 | 9.1 | 0.417 | 0.104 | mg/kg | | | |
| Molybdenum | 7439987 | 0.414 | 0.209 | 0.0626 | mg/kg | | | |
| Nickel | 7440020 | 13.7 | 0.417 | 0.104 | mg/kg | | | |
| Selenium | 7782492 | 0.522 | 1.04 | 0.522 | mg/kg | U | U | |
| Silver | 7440224 | 0.0808 | 0.209 | 0.0417 | mg/kg | J | J | |
| Thallium | 7440280 | 0.371 | 0.209 | 0.0626 | mg/kg | | | |
| Vanadium | 7440622 | 42.7 | 10.4 | 2.09 | mg/kg | | | |
| Zinc | 7440666 | 59.9 | 2.09 | 0.417 | mg/kg | | | |

## *Analysis Method 6020*

**Sample Name** HZBS0082AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234006 **Sample Date:** 10/1/2009 8:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.66 | 1.03 | 0.207 | mg/kg | | | |
| Barium | 7440393 | 83.9 | 0.414 | 0.103 | mg/kg | | | |
| Beryllium | 7440417 | 0.743 | 0.103 | 0.0207 | mg/kg | | | |
| Cadmium | 7440439 | 0.271 | 0.207 | 0.0207 | mg/kg | | | |
| Chromium | 7440473 | 17.5 | 0.621 | 0.207 | mg/kg | | | |
| Cobalt | 7440484 | 5.92 | 0.207 | 0.0621 | mg/kg | | | |
| Copper | 7440508 | 9.02 | 0.207 | 0.0683 | mg/kg | | | |
| Lead | 7439921 | 17.5 | 0.414 | 0.103 | mg/kg | | | |
| Molybdenum | 7439987 | 0.691 | 0.207 | 0.0621 | mg/kg | | | |
| Nickel | 7440020 | 12.9 | 0.414 | 0.103 | mg/kg | | | |
| Selenium | 7782492 | 0.517 | 1.03 | 0.517 | mg/kg | U | U | |
| Silver | 7440224 | 0.0797 | 0.207 | 0.0414 | mg/kg | J | J | |
| Thallium | 7440280 | 0.338 | 0.207 | 0.0621 | mg/kg | | | |
| Vanadium | 7440622 | 34.5 | 10.3 | 2.07 | mg/kg | | | |
| Zinc | 7440666 | 54.5 | 2.07 | 0.414 | mg/kg | | | |

**Sample Name** HZBS0082AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234007 **Sample Date:** 10/1/2009 9:05:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.52 | 1 | 0.2 | mg/kg | | | |
| Barium | 7440393 | 83 | 0.4 | 0.1 | mg/kg | | | |
| Beryllium | 7440417 | 0.764 | 0.1 | 0.02 | mg/kg | | | |
| Cadmium | 7440439 | 0.134 | 0.2 | 0.02 | mg/kg | J | J | |
| Chromium | 7440473 | 16.9 | 0.6 | 0.2 | mg/kg | | | |
| Cobalt | 7440484 | 5.82 | 0.2 | 0.06 | mg/kg | | | |
| Copper | 7440508 | 8.01 | 0.2 | 0.066 | mg/kg | | | |
| Lead | 7439921 | 8.2 | 0.4 | 0.1 | mg/kg | | | |
| Molybdenum | 7439987 | 0.626 | 0.2 | 0.06 | mg/kg | | | |
| Nickel | 7440020 | 10.8 | 0.4 | 0.1 | mg/kg | | | |
| Selenium | 7782492 | 0.5 | 1 | 0.5 | mg/kg | U | U | |
| Silver | 7440224 | 0.0704 | 0.2 | 0.04 | mg/kg | J | J | |
| Thallium | 7440280 | 0.288 | 0.2 | 0.06 | mg/kg | | | |
| Vanadium | 7440622 | 34.3 | 10 | 2 | mg/kg | | | |
| Zinc | 7440666 | 50.3 | 2 | 0.4 | mg/kg | | | |

## *Analysis Method 6020*

**Sample Name** HZBS0084AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234008 **Sample Date:** 10/1/2009 7:50:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.29 | 1 | 0.201 | mg/kg | | | |
| Barium | 7440393 | 96 | 0.401 | 0.1 | mg/kg | | | |
| Beryllium | 7440417 | 0.672 | 0.1 | 0.0201 | mg/kg | | | |
| Cadmium | 7440439 | 0.247 | 0.201 | 0.0201 | mg/kg | | | |
| Chromium | 7440473 | 17.1 | 0.602 | 0.201 | mg/kg | | | |
| Cobalt | 7440484 | 6.07 | 0.201 | 0.0602 | mg/kg | | | |
| Copper | 7440508 | 8.94 | 0.201 | 0.0662 | mg/kg | | | |
| Lead | 7439921 | 13.5 | 0.401 | 0.1 | mg/kg | | | |
| Molybdenum | 7439987 | 0.609 | 0.201 | 0.0602 | mg/kg | | | |
| Nickel | 7440020 | 12.4 | 0.401 | 0.1 | mg/kg | | | |
| Selenium | 7782492 | 0.502 | 1 | 0.502 | mg/kg | U | U | |
| Silver | 7440224 | 0.0827 | 0.201 | 0.0401 | mg/kg | J | J | |
| Thallium | 7440280 | 0.307 | 0.201 | 0.0602 | mg/kg | | | |
| Vanadium | 7440622 | 33.4 | 10 | 2.01 | mg/kg | | | |
| Zinc | 7440666 | 51.1 | 2.01 | 0.401 | mg/kg | | | |

**Sample Name** HZBS0084AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234009 **Sample Date:** 10/1/2009 8:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 4.92 | 1 | 0.2 | mg/kg | | | |
| Barium | 7440393 | 61.4 | 0.4 | 0.1 | mg/kg | | | |
| Beryllium | 7440417 | 0.686 | 0.1 | 0.02 | mg/kg | | | |
| Cadmium | 7440439 | 0.106 | 0.2 | 0.02 | mg/kg | J | J | |
| Chromium | 7440473 | 17.5 | 0.6 | 0.2 | mg/kg | | | |
| Cobalt | 7440484 | 3.81 | 0.2 | 0.06 | mg/kg | | | |
| Copper | 7440508 | 6.59 | 0.2 | 0.066 | mg/kg | | | |
| Lead | 7439921 | 7.76 | 0.4 | 0.1 | mg/kg | | | |
| Molybdenum | 7439987 | 0.459 | 0.2 | 0.06 | mg/kg | | | |
| Nickel | 7440020 | 8.22 | 0.4 | 0.1 | mg/kg | | | |
| Selenium | 7782492 | 0.5 | 1 | 0.5 | mg/kg | U | U | |
| Silver | 7440224 | 0.0658 | 0.2 | 0.04 | mg/kg | J | J | |
| Thallium | 7440280 | 0.203 | 0.2 | 0.06 | mg/kg | | | |
| Vanadium | 7440622 | 35.3 | 10 | 2 | mg/kg | | | |
| Zinc | 7440666 | 42.8 | 2 | 0.4 | mg/kg | | | |

## *Analysis Method 6020*

**Sample Name** HZBS0123AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234010 **Sample Date:** 10/1/2009 1:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.06 | 0.972 | 0.194 | mg/kg | | | |
| Barium | 7440393 | 88.1 | 0.389 | 0.0972 | mg/kg | | | |
| Beryllium | 7440417 | 0.608 | 0.0972 | 0.0194 | mg/kg | | | |
| Cadmium | 7440439 | 0.338 | 0.194 | 0.0194 | mg/kg | | | |
| Chromium | 7440473 | 18.3 | 0.583 | 0.194 | mg/kg | | | |
| Cobalt | 7440484 | 5.85 | 0.194 | 0.0583 | mg/kg | | | |
| Copper | 7440508 | 9.87 | 0.194 | 0.0642 | mg/kg | | | |
| Lead | 7439921 | 20.4 | 0.389 | 0.0972 | mg/kg | | | |
| Molybdenum | 7439987 | 0.53 | 0.194 | 0.0583 | mg/kg | | | |
| Nickel | 7440020 | 13.2 | 0.389 | 0.0972 | mg/kg | | | |
| Selenium | 7782492 | 0.486 | 0.972 | 0.486 | mg/kg | U | U | |
| Silver | 7440224 | 0.0721 | 0.194 | 0.0389 | mg/kg | J | J | |
| Thallium | 7440280 | 0.306 | 0.194 | 0.0583 | mg/kg | | | |
| Vanadium | 7440622 | 33.6 | 9.72 | 1.94 | mg/kg | | | |
| Zinc | 7440666 | 58.3 | 1.94 | 0.389 | mg/kg | | | |

**Sample Name** HZBS0123AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234011 **Sample Date:** 10/1/2009 1:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5 | 1.02 | 0.204 | mg/kg | | | |
| Barium | 7440393 | 69 | 0.408 | 0.102 | mg/kg | | | |
| Beryllium | 7440417 | 0.622 | 0.102 | 0.0204 | mg/kg | | | |
| Cadmium | 7440439 | 0.205 | 0.204 | 0.0204 | mg/kg | | | |
| Chromium | 7440473 | 19.9 | 0.611 | 0.204 | mg/kg | | | |
| Cobalt | 7440484 | 7.19 | 0.204 | 0.0611 | mg/kg | | | |
| Copper | 7440508 | 7.69 | 0.204 | 0.0673 | mg/kg | | | |
| Lead | 7439921 | 7.97 | 0.408 | 0.102 | mg/kg | | | |
| Molybdenum | 7439987 | 0.498 | 0.204 | 0.0611 | mg/kg | | | |
| Nickel | 7440020 | 12 | 0.408 | 0.102 | mg/kg | | | |
| Selenium | 7782492 | 0.509 | 1.02 | 0.509 | mg/kg | U | U | |
| Silver | 7440224 | 0.0432 | 0.204 | 0.0408 | mg/kg | J | J | |
| Thallium | 7440280 | 0.275 | 0.204 | 0.0611 | mg/kg | | | |
| Vanadium | 7440622 | 33.5 | 10.2 | 2.04 | mg/kg | | | |
| Zinc | 7440666 | 53.1 | 2.04 | 0.408 | mg/kg | | | |

## *Analysis Method 6020*

**Sample Name** HZBS0124AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234012 **Sample Date:** 10/1/2009 11:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.56 | 1.01 | 0.202 | mg/kg | | | |
| Barium | 7440393 | 82.8 | 0.404 | 0.101 | mg/kg | | | |
| Beryllium | 7440417 | 0.69 | 0.101 | 0.0202 | mg/kg | | | |
| Cadmium | 7440439 | 0.269 | 0.202 | 0.0202 | mg/kg | | | |
| Chromium | 7440473 | 18.1 | 0.607 | 0.202 | mg/kg | | | |
| Cobalt | 7440484 | 6.06 | 0.202 | 0.0607 | mg/kg | | | |
| Copper | 7440508 | 9.28 | 0.202 | 0.0667 | mg/kg | | | |
| Lead | 7439921 | 10.5 | 0.404 | 0.101 | mg/kg | | | |
| Molybdenum | 7439987 | 0.587 | 0.202 | 0.0607 | mg/kg | | | |
| Nickel | 7440020 | 13.3 | 0.404 | 0.101 | mg/kg | | | |
| Selenium | 7782492 | 0.505 | 1.01 | 0.505 | mg/kg | U | U | |
| Silver | 7440224 | 0.071 | 0.202 | 0.0404 | mg/kg | J | J | |
| Thallium | 7440280 | 0.294 | 0.202 | 0.0607 | mg/kg | | | |
| Vanadium | 7440622 | 33.8 | 10.1 | 2.02 | mg/kg | | | |
| Zinc | 7440666 | 53.1 | 2.02 | 0.404 | mg/kg | | | |

**Sample Name** HZBS0124AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234013 **Sample Date:** 10/1/2009 12:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.37 | 1.01 | 0.202 | mg/kg | | | |
| Barium | 7440393 | 93 | 0.403 | 0.101 | mg/kg | | | |
| Beryllium | 7440417 | 0.736 | 0.101 | 0.0202 | mg/kg | | | |
| Cadmium | 7440439 | 0.188 | 0.202 | 0.0202 | mg/kg | J | J | |
| Chromium | 7440473 | 17.4 | 0.605 | 0.202 | mg/kg | | | |
| Cobalt | 7440484 | 5.46 | 0.202 | 0.0605 | mg/kg | | | |
| Copper | 7440508 | 8.89 | 0.202 | 0.0665 | mg/kg | | | |
| Lead | 7439921 | 7.95 | 0.403 | 0.101 | mg/kg | | | |
| Molybdenum | 7439987 | 0.555 | 0.202 | 0.0605 | mg/kg | | | |
| Nickel | 7440020 | 12 | 0.403 | 0.101 | mg/kg | | | |
| Selenium | 7782492 | 0.504 | 1.01 | 0.504 | mg/kg | U | U | |
| Silver | 7440224 | 0.0691 | 0.202 | 0.0403 | mg/kg | J | J | |
| Thallium | 7440280 | 0.269 | 0.202 | 0.0605 | mg/kg | | | |
| Vanadium | 7440622 | 32.8 | 10.1 | 2.02 | mg/kg | | | |
| Zinc | 7440666 | 52.8 | 2.02 | 0.403 | mg/kg | | | |

## *Analysis Method 6020*

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234014 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.85 | 0.993 | 0.199 | mg/kg | | | |
| Barium | 7440393 | 82.1 | 0.397 | 0.0993 | mg/kg | | | |
| Beryllium | 7440417 | 0.696 | 0.0993 | 0.0199 | mg/kg | | | |
| Cadmium | 7440439 | 0.29 | 0.199 | 0.0199 | mg/kg | | | |
| Chromium | 7440473 | 19.7 | 0.596 | 0.199 | mg/kg | | | |
| Cobalt | 7440484 | 5.94 | 0.199 | 0.0596 | mg/kg | | | |
| Copper | 7440508 | 11.3 | 0.199 | 0.0655 | mg/kg | | | |
| Lead | 7439921 | 17.3 | 0.397 | 0.0993 | mg/kg | | | |
| Molybdenum | 7439987 | 0.509 | 0.199 | 0.0596 | mg/kg | | | |
| Nickel | 7440020 | 14.4 | 0.397 | 0.0993 | mg/kg | | | |
| Selenium | 7782492 | 0.496 | 0.993 | 0.496 | mg/kg | U | U | |
| Silver | 7440224 | 0.086 | 0.199 | 0.0397 | mg/kg | J | J | |
| Thallium | 7440280 | 0.314 | 0.199 | 0.0596 | mg/kg | | | |
| Vanadium | 7440622 | 35.8 | 9.93 | 1.99 | mg/kg | | | |
| Zinc | 7440666 | 57.6 | 1.99 | 0.397 | mg/kg | | | |

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234015 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 4.33 | 0.997 | 0.199 | mg/kg | | | |
| Barium | 7440393 | 63.9 | 0.399 | 0.0997 | mg/kg | | | |
| Beryllium | 7440417 | 0.55 | 0.0997 | 0.0199 | mg/kg | | | |
| Cadmium | 7440439 | 0.149 | 0.199 | 0.0199 | mg/kg | J | J | |
| Chromium | 7440473 | 16 | 0.598 | 0.199 | mg/kg | | | |
| Cobalt | 7440484 | 6.65 | 0.199 | 0.0598 | mg/kg | | | |
| Copper | 7440508 | 7.18 | 0.199 | 0.0658 | mg/kg | | | |
| Lead | 7439921 | 6.84 | 0.399 | 0.0997 | mg/kg | | | |
| Molybdenum | 7439987 | 0.314 | 0.199 | 0.0598 | mg/kg | | | |
| Nickel | 7440020 | 11 | 0.399 | 0.0997 | mg/kg | | | |
| Selenium | 7782492 | 0.498 | 0.997 | 0.498 | mg/kg | U | U | |
| Silver | 7440224 | 0.0465 | 0.199 | 0.0399 | mg/kg | J | J | |
| Thallium | 7440280 | 0.266 | 0.199 | 0.0598 | mg/kg | | | |
| Vanadium | 7440622 | 29.9 | 9.97 | 1.99 | mg/kg | | | |
| Zinc | 7440666 | 48.7 | 1.99 | 0.399 | mg/kg | | | |

## *Analysis Method 6020*

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234016 **Sample Date:** 10/1/2009 3:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.48 | 1.01 | 0.201 | mg/kg | | | |
| Barium | 7440393 | 83.7 | 0.403 | 0.101 | mg/kg | | | |
| Beryllium | 7440417 | 0.632 | 0.101 | 0.0201 | mg/kg | | | |
| Cadmium | 7440439 | 0.278 | 0.201 | 0.0201 | mg/kg | | | |
| Chromium | 7440473 | 17.7 | 0.604 | 0.201 | mg/kg | | | |
| Cobalt | 7440484 | 6.13 | 0.201 | 0.0604 | mg/kg | | | |
| Copper | 7440508 | 9.96 | 0.201 | 0.0665 | mg/kg | | | |
| Lead | 7439921 | 15.9 | 0.403 | 0.101 | mg/kg | | | |
| Molybdenum | 7439987 | 0.578 | 0.201 | 0.0604 | mg/kg | | | |
| Nickel | 7440020 | 13.8 | 0.403 | 0.101 | mg/kg | | | |
| Selenium | 7782492 | 0.503 | 1.01 | 0.503 | mg/kg | U | U | |
| Silver | 7440224 | 0.0677 | 0.201 | 0.0403 | mg/kg | J | J | |
| Thallium | 7440280 | 0.283 | 0.201 | 0.0604 | mg/kg | | | |
| Vanadium | 7440622 | 31.6 | 10.1 | 2.01 | mg/kg | | | |
| Zinc | 7440666 | 50.8 | 2.01 | 0.403 | mg/kg | | | |

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234017 **Sample Date:** 10/1/2009 3:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.91 | 1.08 | 0.216 | mg/kg | | | |
| Barium | 7440393 | 101 | 0.433 | 0.108 | mg/kg | | | |
| Beryllium | 7440417 | 0.756 | 0.108 | 0.0216 | mg/kg | | | |
| Cadmium | 7440439 | 0.168 | 0.216 | 0.0216 | mg/kg | J | J | |
| Chromium | 7440473 | 19.3 | 0.649 | 0.216 | mg/kg | | | |
| Cobalt | 7440484 | 7.18 | 0.216 | 0.0649 | mg/kg | | | |
| Copper | 7440508 | 8 | 0.216 | 0.0714 | mg/kg | | | |
| Lead | 7439921 | 7.76 | 0.433 | 0.108 | mg/kg | | | |
| Molybdenum | 7439987 | 0.536 | 0.216 | 0.0649 | mg/kg | | | |
| Nickel | 7440020 | 13.1 | 0.433 | 0.108 | mg/kg | | | |
| Selenium | 7782492 | 0.541 | 1.08 | 0.541 | mg/kg | U | U | |
| Silver | 7440224 | 0.0673 | 0.216 | 0.0433 | mg/kg | J | J | |
| Thallium | 7440280 | 0.295 | 0.216 | 0.0649 | mg/kg | | | |
| Vanadium | 7440622 | 35.9 | 10.8 | 2.16 | mg/kg | | | |
| Zinc | 7440666 | 51.3 | 2.16 | 0.433 | mg/kg | | | |

## *Analysis Method 6020*

**Sample Name** HZBS0180S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234018 **Sample Date:** 10/1/2009 9:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 5.29 | 1.01 | 0.203 | mg/kg | | | |
| Barium | 7440393 | 79.2 | 0.405 | 0.101 | mg/kg | | | |
| Beryllium | 7440417 | 0.581 | 0.101 | 0.0203 | mg/kg | | | |
| Cadmium | 7440439 | 0.276 | 0.203 | 0.0203 | mg/kg | | | |
| Chromium | 7440473 | 16.7 | 0.608 | 0.203 | mg/kg | | | |
| Cobalt | 7440484 | 5.59 | 0.203 | 0.0608 | mg/kg | | | |
| Copper | 7440508 | 8.86 | 0.203 | 0.0668 | mg/kg | | | |
| Lead | 7439921 | 13 | 0.405 | 0.101 | mg/kg | | | |
| Molybdenum | 7439987 | 0.579 | 0.203 | 0.0608 | mg/kg | | | |
| Nickel | 7440020 | 12 | 0.405 | 0.101 | mg/kg | | | |
| Selenium | 7782492 | 0.506 | 1.01 | 0.506 | mg/kg | U | U | |
| Silver | 7440224 | 0.0677 | 0.203 | 0.0405 | mg/kg | J | J | |
| Thallium | 7440280 | 0.299 | 0.203 | 0.0608 | mg/kg | | | |
| Vanadium | 7440622 | 31.9 | 10.1 | 2.03 | mg/kg | | | |
| Zinc | 7440666 | 52.7 | 2.03 | 0.405 | mg/kg | | | |

**Sample Name** HZBS0180S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234019 **Sample Date:** 10/1/2009 10:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440382 | 4.78 | 1 | 0.2 | mg/kg | | | |
| Barium | 7440393 | 78.7 | 0.401 | 0.1 | mg/kg | | | |
| Beryllium | 7440417 | 0.634 | 0.1 | 0.02 | mg/kg | | | |
| Cadmium | 7440439 | 0.151 | 0.2 | 0.02 | mg/kg | J | J | |
| Chromium | 7440473 | 14.7 | 0.601 | 0.2 | mg/kg | | | |
| Cobalt | 7440484 | 4.81 | 0.2 | 0.0601 | mg/kg | | | |
| Copper | 7440508 | 6.72 | 0.2 | 0.0662 | mg/kg | | | |
| Lead | 7439921 | 7.08 | 0.401 | 0.1 | mg/kg | | | |
| Molybdenum | 7439987 | 0.532 | 0.2 | 0.0601 | mg/kg | | | |
| Nickel | 7440020 | 9.42 | 0.401 | 0.1 | mg/kg | | | |
| Selenium | 7782492 | 0.501 | 1 | 0.501 | mg/kg | U | U | |
| Silver | 7440224 | 0.0678 | 0.2 | 0.0401 | mg/kg | J | J | |
| Thallium | 7440280 | 0.251 | 0.2 | 0.0601 | mg/kg | | | |
| Vanadium | 7440622 | 31.3 | 10 | 2 | mg/kg | | | |
| Zinc | 7440666 | 49.5 | 2 | 0.401 | mg/kg | | | |

## *Analysis Method 6850*

**Sample Name** HZBS0080AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234004 **Sample Date:** 10/1/2009 2:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.288 | 0.206 | 0.0514 | ug/L | | | |

**Sample Name** HZBS0080AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234005 **Sample Date:** 10/1/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.21 | 0.21 | 0.0524 | ug/L | U | U | |

**Sample Name** HZBS0082AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234006 **Sample Date:** 10/1/2009 8:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.236 | 0.207 | 0.0517 | ug/L | | | |

**Sample Name** HZBS0082AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234007 **Sample Date:** 10/1/2009 9:05:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.21 | 0.21 | 0.0525 | ug/L | U | U | |

**Sample Name** HZBS0084AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234008 **Sample Date:** 10/1/2009 7:50:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.0702 | 0.202 | 0.0505 | ug/L | | J | Lab did not provide qualifications . |

**Sample Name** HZBS0084AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234009 **Sample Date:** 10/1/2009 8:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.0546 | 0.21 | 0.0525 | ug/L | | J | Lab did not provide qualifications . |

## *Analysis Method 6850*

**Sample Name** HZBS0123AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234010 **Sample Date:** 10/1/2009 1:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.165 | 0.203 | 0.0506 | ug/L | | J | Lab did not provide qualifications . |

**Sample Name** HZBS0123AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234011 **Sample Date:** 10/1/2009 1:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.111 | 0.206 | 0.0515 | ug/L | | J | Lab did not provide qualifications . |

**Sample Name** HZBS0124AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234012 **Sample Date:** 10/1/2009 11:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.0832 | 0.204 | 0.051 | ug/L | | J | Lab did not provide qualifications . |

**Sample Name** HZBS0124AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234013 **Sample Date:** 10/1/2009 12:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.073 | 0.208 | 0.052 | ug/L | | J | Lab did not provide qualifications . |

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234014 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.203 | 0.203 | 0.0507 | ug/L | U | U | |

*Analysis Method 6850*

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234015 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.167 | 0.205 | 0.0512 | ug/L | | J | Lab did not provide qualifications . |

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234016 **Sample Date:** 10/1/2009 3:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.0652 | 0.202 | 0.0506 | ug/L | | J | Lab did not provide qualifications . |

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234017 **Sample Date:** 10/1/2009 3:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.224 | 0.224 | 0.056 | ug/L | U | U | |

**Sample Name** HZBS0180S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234018 **Sample Date:** 10/1/2009 9:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.236 | 0.205 | 0.0511 | ug/L | | | |

**Sample Name** HZBS0180S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234019 **Sample Date:** 10/1/2009 10:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 14797730 | 0.125 | 0.208 | 0.0521 | ug/L | | J | Lab did not provide qualifications . |

*Analysis Method 7470A*

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | EBQW2249 | **Matrix Type:** | Water | **Result Type:** | Primary Result |
| **Lab Sample Name:** | 238234001 | **Sample Date:** | 10/1/2009 3:30:00 PM | **Validation Level:** | V |

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.066 | 0.2 | 0.066 | ug/L | U | U | |

## *Analysis Method 7471A*

**Sample Name** HZBS0080AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234004 **Sample Date:** 10/1/2009 2:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0159 | 0.0111 | 0.00377 | mg/kg | | J | B |

**Sample Name** HZBS0080AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234005 **Sample Date:** 10/1/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0145 | 0.0117 | 0.00399 | mg/kg | | J | B |

**Sample Name** HZBS0082AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234006 **Sample Date:** 10/1/2009 8:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.011 | 0.0103 | 0.00351 | mg/kg | | J | B |

**Sample Name** HZBS0082AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234007 **Sample Date:** 10/1/2009 9:05:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.00718 | 0.0113 | 0.00384 | mg/kg | J | J | B |

**Sample Name** HZBS0084AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234008 **Sample Date:** 10/1/2009 7:50:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0153 | 0.0119 | 0.00403 | mg/kg | | J | B |

**Sample Name** HZBS0084AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234009 **Sample Date:** 10/1/2009 8:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.00783 | 0.0123 | 0.00418 | mg/kg | J | J | B |

**Sample Name** HZBS0123AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234010 **Sample Date:** 10/1/2009 1:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0219 | 0.0121 | 0.00412 | mg/kg | | J | B |

## *Analysis Method 7471A*

**Sample Name** HZBS0123AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234011 **Sample Date:** 10/1/2009 1:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.00769 | 0.0105 | 0.00357 | mg/kg | J | J | B |

**Sample Name** HZBS0124AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234012 **Sample Date:** 10/1/2009 11:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0113 | 0.0112 | 0.00382 | mg/kg | | J | B |

**Sample Name** HZBS0124AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234013 **Sample Date:** 10/1/2009 12:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0109 | 0.0125 | 0.00424 | mg/kg | J | J | B |

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234014 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0146 | 0.0121 | 0.00411 | mg/kg | | J | B |

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234015 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.00874 | 0.0104 | 0.00353 | mg/kg | J | J | B |

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234016 **Sample Date:** 10/1/2009 3:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0158 | 0.0121 | 0.00412 | mg/kg | | J | B |

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234017 **Sample Date:** 10/1/2009 3:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0104 | 0.0127 | 0.00431 | mg/kg | J | J | B |

## *Analysis Method 7471A*

**Sample Name** HZBS0180S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234018 **Sample Date:** 10/1/2009 9:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.00357 | 0.0105 | 0.00357 | mg/kg | U | UJ | B |

**Sample Name** HZBS0180S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234019 **Sample Date:** 10/1/2009 10:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439976 | 0.0104 | 0.0113 | 0.00385 | mg/kg | J | J | B |

## *Analysis Method 8015B*

**Sample Name** EBQW2249 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238234001 **Sample Date:** 10/1/2009 3:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 95.2 | 95.2 | 31.4 | ug/L | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 95.2 | 95.2 | 31.4 | ug/L | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 95.2 | 95.2 | 31.4 | ug/L | U | U | |
| EFH (C8 - C11) | EFHD (C8- | 95.2 | 95.2 | 31.4 | ug/L | U | U | |

**Sample Name** HVBF33AS01 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234002 **Sample Date:** 10/1/2009 10:18:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 2.11 | 3.4 | 1.12 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |

**Sample Name** HVBF33AS02 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234003 **Sample Date:** 10/1/2009 10:40:00 AM **Validation Level:** V

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

**Sample Name** HZBS0080AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234004 **Sample Date:** 10/1/2009 2:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.43 | 3.43 | 1.13 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.43 | 3.43 | 1.13 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 3.34 | 3.43 | 1.13 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.43 | 3.43 | 1.13 | mg/kg | U | U | |

## *Analysis Method 8015B*

**Sample Name** HZBS0080AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234005 **Sample Date:** 10/1/2009 2:45:00 PM **Validation Level:** V

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

**Sample Name** HZBS0082AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234006 **Sample Date:** 10/1/2009 8:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.44 | 3.44 | 1.14 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.44 | 3.44 | 1.14 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 1.74 | 3.44 | 1.14 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.44 | 3.44 | 1.14 | mg/kg | U | U | |

**Sample Name** HZBS0082AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234007 **Sample Date:** 10/1/2009 9:05:00 AM **Validation Level:** V

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

**Sample Name** HZBS0084AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234008 **Sample Date:** 10/1/2009 7:50:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.37 | 3.37 | 1.11 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.37 | 3.37 | 1.11 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 2.02 | 3.37 | 1.11 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.37 | 3.37 | 1.11 | mg/kg | U | U | |

## *Analysis Method 8015B*

**Sample Name** HZBS0084AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234009 **Sample Date:** 10/1/2009 8:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.5 | 3.5 | 1.15 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.5 | 3.5 | 1.15 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 3.5 | 3.5 | 1.15 | mg/kg | U | U | |
| EFH (C8 - C11) | EFHD (C8- | 3.5 | 3.5 | 1.15 | mg/kg | U | U | |

**Sample Name** HZBS0123AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234010 **Sample Date:** 10/1/2009 1:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.38 | 3.38 | 1.11 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.38 | 3.38 | 1.11 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 6.11 | 3.38 | 1.11 | mg/kg | | | |
| EFH (C8 - C11) | EFHD (C8- | 3.38 | 3.38 | 1.11 | mg/kg | U | U | |

**Sample Name** HZBS0123AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234011 **Sample Date:** 10/1/2009 1:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.43 | 3.43 | 1.13 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.43 | 3.43 | 1.13 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 2.31 | 3.43 | 1.13 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.43 | 3.43 | 1.13 | mg/kg | U | U | |

**Sample Name** HZBS0124AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234012 **Sample Date:** 10/1/2009 11:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 2.8 | 3.4 | 1.12 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.4 | 3.4 | 1.12 | mg/kg | U | U | |

## *Analysis Method 8015B*

**Sample Name** HZBS0124AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234013 **Sample Date:** 10/1/2009 12:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.47 | 3.47 | 1.14 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.47 | 3.47 | 1.14 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 3.47 | 3.47 | 1.14 | mg/kg | U | U | |
| EFH (C8 - C11) | EFHD (C8- | 3.47 | 3.47 | 1.14 | mg/kg | U | U | |

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234014 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.37 | 3.37 | 1.11 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 1.52 | 3.37 | 1.11 | mg/kg | J | J | |
| EFH (C21 - C30) | EFHD (C21 | 3.89 | 3.37 | 1.11 | mg/kg | | | |
| EFH (C8 - C11) | EFHD (C8- | 3.37 | 3.37 | 1.11 | mg/kg | U | U | |

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234015 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.42 | 3.42 | 1.13 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.42 | 3.42 | 1.13 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 1.75 | 3.42 | 1.13 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.42 | 3.42 | 1.13 | mg/kg | U | U | |

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234016 **Sample Date:** 10/1/2009 3:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.37 | 3.37 | 1.11 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.37 | 3.37 | 1.11 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 5.07 | 3.37 | 1.11 | mg/kg | | | |
| EFH (C8 - C11) | EFHD (C8- | 3.37 | 3.37 | 1.11 | mg/kg | U | U | |

## *Analysis Method 8015B*

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234017 **Sample Date:** 10/1/2009 3:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.73 | 3.73 | 1.23 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.73 | 3.73 | 1.23 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 3.73 | 3.73 | 1.23 | mg/kg | U | U | |
| EFH (C8 - C11) | EFHD (C8- | 3.73 | 3.73 | 1.23 | mg/kg | U | U | |

**Sample Name** HZBS0180S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234018 **Sample Date:** 10/1/2009 9:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.41 | 3.41 | 1.12 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 5.96 | 3.41 | 1.12 | mg/kg | | | |
| EFH (C21 - C30) | EFHD (C21 | 24 | 3.41 | 1.12 | mg/kg | | | |
| EFH (C8 - C11) | EFHD (C8- | 3.41 | 3.41 | 1.12 | mg/kg | U | U | |

**Sample Name** HZBS0180S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234019 **Sample Date:** 10/1/2009 10:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| EFH (C12 - C14) | EFHD (C12 | 3.47 | 3.47 | 1.15 | mg/kg | U | U | |
| EFH (C15 - C20) | EFHD (C15 | 3.47 | 3.47 | 1.15 | mg/kg | U | U | |
| EFH (C21 - C30) | EFHD (C21 | 2.54 | 3.47 | 1.15 | mg/kg | J | J | |
| EFH (C8 - C11) | EFHD (C8- | 3.47 | 3.47 | 1.15 | mg/kg | U | U | |

## *Analysis Method 8082*

**Sample Name** EBQW2249 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238234001 **Sample Date:** 10/1/2009 3:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 0.0943 | 0.0943 | 0.0314 | ug/L | U | U | |
| Aroclor-1221 | 11104282 | 0.0943 | 0.0943 | 0.0314 | ug/L | U | U | |
| Aroclor-1232 | 11141165 | 0.0943 | 0.0943 | 0.0314 | ug/L | U | U | |
| Aroclor-1242 | 53469219 | 0.0943 | 0.0943 | 0.0314 | ug/L | U | U | |
| Aroclor-1248 | 12672296 | 0.0943 | 0.0943 | 0.0314 | ug/L | U | U | |
| Aroclor-1254 | 11097691 | 0.0943 | 0.0943 | 0.0314 | ug/L | U | U | |
| Aroclor-1260 | 11096825 | 0.0943 | 0.0943 | 0.0314 | ug/L | U | U | |

**Sample Name** HVBF33AS01 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234002 **Sample Date:** 10/1/2009 10:18:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |

**Sample Name** HVBF33AS02 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234003 **Sample Date:** 10/1/2009 10:40:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |

## *Analysis Method 8082*

**Sample Name** HZBS0080AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234004 **Sample Date:** 10/1/2009 2:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |

**Sample Name** HZBS0080AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234005 **Sample Date:** 10/1/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |

**Sample Name** HZBS0082AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234006 **Sample Date:** 10/1/2009 8:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.44 | 3.44 | 1.15 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.44 | 3.44 | 1.15 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.44 | 3.44 | 1.15 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.44 | 3.44 | 1.15 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.44 | 3.44 | 1.15 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.44 | 3.44 | 1.15 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.44 | 3.44 | 1.15 | ug/kg | U | U | |

## *Analysis Method 8082*

**Sample Name** HZBS0082AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234007 **Sample Date:** 10/1/2009 9:05:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.5 | 3.5 | 1.16 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.5 | 3.5 | 1.16 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.5 | 3.5 | 1.16 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.5 | 3.5 | 1.16 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.5 | 3.5 | 1.16 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.5 | 3.5 | 1.16 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.5 | 3.5 | 1.16 | ug/kg | U | U | |

**Sample Name** HZBS0084AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234008 **Sample Date:** 10/1/2009 7:50:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |

**Sample Name** HZBS0084AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234009 **Sample Date:** 10/1/2009 8:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.5 | 3.5 | 1.17 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.5 | 3.5 | 1.17 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.5 | 3.5 | 1.17 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.5 | 3.5 | 1.17 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.5 | 3.5 | 1.17 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.5 | 3.5 | 1.17 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.5 | 3.5 | 1.17 | ug/kg | U | U | |

## *Analysis Method 8082*

**Sample Name** HZBS0123AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234010 **Sample Date:** 10/1/2009 1:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 2.5 | 3.37 | 1.12 | ug/kg | J | J | |
| Aroclor-1260 | 11096825 | 5.2 | 3.37 | 1.12 | ug/kg | P | J | *III |

**Sample Name** HZBS0123AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234011 **Sample Date:** 10/1/2009 1:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.43 | 3.43 | 1.14 | ug/kg | U | U | |

**Sample Name** HZBS0124AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234012 **Sample Date:** 10/1/2009 11:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |

## *Analysis Method 8082*

**Sample Name** HZBS0124AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234013 **Sample Date:** 10/1/2009 12:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234014 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.38 | 3.38 | 1.13 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.38 | 3.38 | 1.13 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.38 | 3.38 | 1.13 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.38 | 3.38 | 1.13 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.38 | 3.38 | 1.13 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.38 | 3.38 | 1.13 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.38 | 3.38 | 1.13 | ug/kg | U | U | |

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234015 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.41 | 3.41 | 1.13 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.41 | 3.41 | 1.13 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.41 | 3.41 | 1.13 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.41 | 3.41 | 1.13 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.41 | 3.41 | 1.13 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.41 | 3.41 | 1.13 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.41 | 3.41 | 1.13 | ug/kg | U | U | |

## *Analysis Method 8082*

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234016 **Sample Date:** 10/1/2009 3:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.37 | 3.37 | 1.12 | ug/kg | U | U | |

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234017 **Sample Date:** 10/1/2009 3:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.74 | 3.74 | 1.24 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.74 | 3.74 | 1.24 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.74 | 3.74 | 1.24 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.74 | 3.74 | 1.24 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.74 | 3.74 | 1.24 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.74 | 3.74 | 1.24 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.74 | 3.74 | 1.24 | ug/kg | U | U | |

**Sample Name** HZBS0180S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234018 **Sample Date:** 10/1/2009 9:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.4 | 3.4 | 1.13 | ug/kg | U | U | |

*Analysis Method 8082*

**Sample Name** HZBS0180S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234019 **Sample Date:** 10/1/2009 10:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.47 | 3.47 | 1.15 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** EBQW2249 **Matrix Type:** Water **Result Type:** Primary Result

**Lab Sample Name:** 238234001 **Sample Date:** 10/1/2009 3:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| 2-Methylnaphthalene | 91576 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Acenaphthene | 83329 | 0.472 | 0.472 | 0.146 | ug/L | U | U | |
| Acenaphthylene | 208968 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Anthracene | 120127 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(a)anthracene | 56553 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(a)pyrene | 50328 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(b)fluoranthene | 205992 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(ghi)perylene | 191242 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Benzo(k)fluoranthene | 207089 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 0.472 | 0.472 | 0.142 | ug/L | BJ | U | B, result changed from 0.157 |
| Butyl benzyl phthalate | 85687 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Chrysene | 218019 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Diethylphthalate | 84662 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Dimethylphthalate | 131113 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Di-n-butylphthalate | 84742 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Di-n-octyl-phthalate | 117840 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| Fluoranthene | 206440 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Fluorene | 86737 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Naphthalene | 91203 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |
| n-Nitrosodimethylamine | 62759 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Phenanthrene | 85018 | 0.472 | 0.472 | 0.0943 | ug/L | U | U | |
| Pyrene | 129000 | 0.472 | 0.472 | 0.142 | ug/L | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HVBF33AS01 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234002 **Sample Date:** 10/1/2009 10:18:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17 | 17 | 5.1 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17 | 17 | 3.4 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17 | 17 | 5.67 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Anthracene | 120127 | 17 | 17 | 3.4 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17 | 17 | 5.1 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 28.9 | 17 | 5.61 | ug/kg | | | |
| Butyl benzyl phthalate | 85687 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Chrysene | 218019 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Fluorene | 86737 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Naphthalene | 91203 | 17 | 17 | 5.1 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17 | 17 | 3.4 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17 | 17 | 5.1 | ug/kg | U | U | |
| Pyrene | 129000 | 17 | 17 | 5.33 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HVBF33AS02 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234003 **Sample Date:** 10/1/2009 10:40:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.5 | 17.5 | 3.5 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.5 | 17.5 | 5.84 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Anthracene | 120127 | 17.5 | 17.5 | 3.5 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 14.7 | 17.5 | 5.77 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Chrysene | 218019 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Fluorene | 86737 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.5 | 17.5 | 3.5 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.5 | 17.5 | 5.24 | ug/kg | U | U | |
| Pyrene | 129000 | 17.5 | 17.5 | 5.49 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0080AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234004 **Sample Date:** 10/1/2009 2:35:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.1 | 17.1 | 3.43 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.1 | 17.1 | 5.72 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Anthracene | 120127 | 17.1 | 17.1 | 3.43 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 11.8 | 17.1 | 5.65 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Chrysene | 218019 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Fluorene | 86737 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.1 | 17.1 | 3.43 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Pyrene | 129000 | 17.1 | 17.1 | 5.38 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0080AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234005 **Sample Date:** 10/1/2009 2:45:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.4 | 17.4 | 3.49 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.4 | 17.4 | 5.83 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Anthracene | 120127 | 17.4 | 17.4 | 3.49 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 12.8 | 17.4 | 5.76 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Chrysene | 218019 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Fluorene | 86737 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.4 | 17.4 | 3.49 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.4 | 17.4 | 5.23 | ug/kg | U | U | |
| Pyrene | 129000 | 17.4 | 17.4 | 5.48 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0082AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234006 **Sample Date:** 10/1/2009 8:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.2 | 17.2 | 3.44 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.2 | 17.2 | 5.74 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Anthracene | 120127 | 17.2 | 17.2 | 3.44 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 16.2 | 17.2 | 5.67 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Chrysene | 218019 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Fluorene | 86737 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.2 | 17.2 | 3.44 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.2 | 17.2 | 5.16 | ug/kg | U | U | |
| Pyrene | 129000 | 17.2 | 17.2 | 5.4 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0082AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234007 **Sample Date:** 10/1/2009 9:05:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.4 | 17.4 | 3.48 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.4 | 17.4 | 5.81 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Anthracene | 120127 | 17.4 | 17.4 | 3.48 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 10.9 | 17.4 | 5.74 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Chrysene | 218019 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Fluorene | 86737 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.4 | 17.4 | 3.48 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.4 | 17.4 | 5.22 | ug/kg | U | U | |
| Pyrene | 129000 | 17.4 | 17.4 | 5.46 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0084AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234008 **Sample Date:** 10/1/2009 7:50:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 16.7 | 16.7 | 3.34 | ug/kg | U | U | |
| Acenaphthene | 83329 | 16.7 | 16.7 | 5.58 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Anthracene | 120127 | 16.7 | 16.7 | 3.34 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 23.4 | 16.7 | 5.52 | ug/kg | | | |
| Butyl benzyl phthalate | 85687 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Chrysene | 218019 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Fluoranthene | 206440 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Fluorene | 86737 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Naphthalene | 91203 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 16.7 | 16.7 | 3.34 | ug/kg | U | U | |
| Phenanthrene | 85018 | 16.7 | 16.7 | 5.02 | ug/kg | U | U | |
| Pyrene | 129000 | 16.7 | 16.7 | 5.25 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0084AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234009 **Sample Date:** 10/1/2009 8:15:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.5 | 17.5 | 3.5 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.5 | 17.5 | 5.84 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Anthracene | 120127 | 17.5 | 17.5 | 3.5 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 11.8 | 17.5 | 5.77 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Chrysene | 218019 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Fluorene | 86737 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.5 | 17.5 | 3.5 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.5 | 17.5 | 5.25 | ug/kg | U | U | |
| Pyrene | 129000 | 17.5 | 17.5 | 5.49 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0123AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234010 **Sample Date:** 10/1/2009 1:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 16.8 | 16.8 | 3.37 | ug/kg | U | U | |
| Acenaphthene | 83329 | 16.8 | 16.8 | 5.62 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Anthracene | 120127 | 16.8 | 16.8 | 3.37 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 16.6 | 16.8 | 5.55 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 6.39 | 16.8 | 5.05 | ug/kg | J | J | |
| Chrysene | 218019 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Fluoranthene | 206440 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Fluorene | 86737 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Naphthalene | 91203 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 16.8 | 16.8 | 3.37 | ug/kg | U | U | |
| Phenanthrene | 85018 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Pyrene | 129000 | 16.8 | 16.8 | 5.29 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0123AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234011 **Sample Date:** 10/1/2009 1:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.1 | 17.1 | 3.43 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.1 | 17.1 | 5.73 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Anthracene | 120127 | 17.1 | 17.1 | 3.43 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 12.6 | 17.1 | 5.66 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Chrysene | 218019 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Fluorene | 86737 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.1 | 17.1 | 3.43 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.1 | 17.1 | 5.14 | ug/kg | U | U | |
| Pyrene | 129000 | 17.1 | 17.1 | 5.38 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0124AS001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234012 **Sample Date:** 10/1/2009 11:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 16.9 | 16.9 | 3.38 | ug/kg | U | U | |
| Acenaphthene | 83329 | 16.9 | 16.9 | 5.65 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Anthracene | 120127 | 16.9 | 16.9 | 3.38 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 9.77 | 16.9 | 5.58 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Chrysene | 218019 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Fluoranthene | 206440 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Fluorene | 86737 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Naphthalene | 91203 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 16.9 | 16.9 | 3.38 | ug/kg | U | U | |
| Phenanthrene | 85018 | 16.9 | 16.9 | 5.07 | ug/kg | U | U | |
| Pyrene | 129000 | 16.9 | 16.9 | 5.31 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0124AS002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234013 **Sample Date:** 10/1/2009 12:30:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.3 | 17.3 | 3.47 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.3 | 17.3 | 5.79 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Anthracene | 120127 | 17.3 | 17.3 | 3.47 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 11.9 | 17.3 | 5.72 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Chrysene | 218019 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Fluorene | 86737 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.3 | 17.3 | 3.47 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.3 | 17.3 | 5.2 | ug/kg | U | U | |
| Pyrene | 129000 | 17.3 | 17.3 | 5.44 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0175S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234014 **Sample Date:** 10/1/2009 1:50:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 16.9 | 16.9 | 3.37 | ug/kg | U | U | |
| Acenaphthene | 83329 | 16.9 | 16.9 | 5.63 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Anthracene | 120127 | 16.9 | 16.9 | 3.37 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 12.9 | 16.9 | 5.56 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Chrysene | 218019 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Fluoranthene | 206440 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Fluorene | 86737 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Naphthalene | 91203 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 16.9 | 16.9 | 3.37 | ug/kg | U | U | |
| Phenanthrene | 85018 | 16.9 | 16.9 | 5.06 | ug/kg | U | U | |
| Pyrene | 129000 | 16.9 | 16.9 | 5.29 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0175S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234015 **Sample Date:** 10/1/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17 | 17 | 5.11 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17 | 17 | 3.41 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17 | 17 | 5.69 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Anthracene | 120127 | 17 | 17 | 3.41 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17 | 17 | 5.11 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 6.18 | 17 | 5.63 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Chrysene | 218019 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Fluorene | 86737 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Naphthalene | 91203 | 17 | 17 | 5.11 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17 | 17 | 3.41 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17 | 17 | 5.11 | ug/kg | U | U | |
| Pyrene | 129000 | 17 | 17 | 5.35 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0177S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234016 **Sample Date:** 10/1/2009 3:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 16.8 | 16.8 | 3.37 | ug/kg | U | U | |
| Acenaphthene | 83329 | 16.8 | 16.8 | 5.62 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Anthracene | 120127 | 16.8 | 16.8 | 3.37 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 19.4 | 16.8 | 5.56 | ug/kg | | | |
| Butyl benzyl phthalate | 85687 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Chrysene | 218019 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Fluoranthene | 206440 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Fluorene | 86737 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Naphthalene | 91203 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 16.8 | 16.8 | 3.37 | ug/kg | U | U | |
| Phenanthrene | 85018 | 16.8 | 16.8 | 5.05 | ug/kg | U | U | |
| Pyrene | 129000 | 16.8 | 16.8 | 5.29 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0177S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234017 **Sample Date:** 10/1/2009 3:15:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 18.7 | 18.7 | 3.73 | ug/kg | U | U | |
| Acenaphthene | 83329 | 18.7 | 18.7 | 6.23 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Anthracene | 120127 | 18.7 | 18.7 | 3.73 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 11.1 | 18.7 | 6.16 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Chrysene | 218019 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Fluoranthene | 206440 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Fluorene | 86737 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Naphthalene | 91203 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 18.7 | 18.7 | 3.73 | ug/kg | U | U | |
| Phenanthrene | 85018 | 18.7 | 18.7 | 5.6 | ug/kg | U | U | |
| Pyrene | 129000 | 18.7 | 18.7 | 5.86 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0180S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234018 **Sample Date:** 10/1/2009 9:30:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17 | 17 | 5.09 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17 | 17 | 3.39 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17 | 17 | 5.66 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Anthracene | 120127 | 17 | 17 | 3.39 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17 | 17 | 5.09 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 12.8 | 17 | 5.59 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Chrysene | 218019 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 6.39 | 17 | 5.09 | ug/kg | J | J | |
| Di-n-octyl-phthalate | 117840 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Fluorene | 86737 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Naphthalene | 91203 | 17 | 17 | 5.09 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17 | 17 | 3.39 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17 | 17 | 5.09 | ug/kg | U | U | |
| Pyrene | 129000 | 17 | 17 | 5.32 | ug/kg | U | U | |

## *Analysis Method 8270C SIM*

**Sample Name** HZBS0180S002 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238234019 **Sample Date:** 10/1/2009 10:00:00 AM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| 1-Methyl naphthalene | 90120 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| 2-Methylnaphthalene | 91576 | 17.3 | 17.3 | 3.46 | ug/kg | U | U | |
| Acenaphthene | 83329 | 17.3 | 17.3 | 5.77 | ug/kg | U | U | |
| Acenaphthylene | 208968 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Anthracene | 120127 | 17.3 | 17.3 | 3.46 | ug/kg | U | U | |
| Benzo(a)anthracene | 56553 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Benzo(a)pyrene | 50328 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Benzo(b)fluoranthene | 205992 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Benzo(ghi)perylene | 191242 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Benzo(k)fluoranthene | 207089 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| bis(2-ethylhexyl)phthalate | 117817 | 7.67 | 17.3 | 5.7 | ug/kg | J | J | |
| Butyl benzyl phthalate | 85687 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Chrysene | 218019 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Dibenzo(a,h)anthracene | 53703 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Diethylphthalate | 84662 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Dimethylphthalate | 131113 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Di-n-butylphthalate | 84742 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Di-n-octyl-phthalate | 117840 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Fluoranthene | 206440 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Fluorene | 86737 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Indeno(1,2,3-cd)pyrene | 193395 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Naphthalene | 91203 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| n-Nitrosodimethylamine | 62759 | 17.3 | 17.3 | 3.46 | ug/kg | U | U | |
| Phenanthrene | 85018 | 17.3 | 17.3 | 5.19 | ug/kg | U | U | |
| Pyrene | 129000 | 17.3 | 17.3 | 5.43 | ug/kg | U | U | |

# Chain of Custody and Supporting Documentation

238383

BOEING

# CHAIN OF CUSTODY RECORD

COC #: MWHAG20091005_00

Page: 1 of 1

| Customer Information | | Project Information | | Project Information | | | |
|---|---|---|---|---|---|---|---|
| Site: | SSFL | Client Name: | Boeing | Collector: | A. Goldenberg | Boeing PM: | |
| Company: | MWH | Sampling Event: | ISRA Sampling, August 2009 | Contact #: | | | |
| Report to: | Sarah Von Raesfeld | Project Number: | 1891614.05462 | | | | |
| 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 | | | | |
| | | | Charleston, SC 29407 | | | | |
| | | Lab Phone: | (843) 769-7388 | | | | |

| Sample Name | Matrix | Date | Time | No. of Containers | D2216 Moisture Soil | Metals 6020 Soil Lead | PCB by SW8082 - Soil | Comments |
|---|---|---|---|---|---|---|---|---|
| HZET0237S001 | Soil | 10/5/2009 | 13:55 | 1 | 3 | 2 | 3 | |
| HZET0238S001 | Soil | 10/5/2009 | 14:00 | 1 | 3 | 2 | 3 | |
| HZET0239S001 | Soil | 10/5/2009 | 14:18 | 1 | 3 | 2 | 3 | |
| HZET0240S001 | Soil | 10/5/2009 | 14:10 | 1 | 3 | 2 | 3 | |
| HZET0241S001 | Soil | 10/5/2009 | 14:05 | 1 | 3 | 2 | 3 | |

Requested Analyses

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 bellow are Turn Around Times.

| 1. Relinquished by: | Date: | 2. Received by: | Date: | 3. Relinquished by: | Date: | 4. Received by: | Date: |
|---|---|---|---|---|---|---|---|
| | 10/5/09 | | 10/6/09 | | | | |
| Company: MWH | Time: 1525 | Company: GEL | Time: 0930 | Company: | Time: | Company: | Time: |

Comments:

Geotracker EDF ☐

Data Validation Package ☑ Level IV

5

GEL Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| **Client:** SSFL | **SDG/ARCOC/Work Order:** 238358 |
| **Received By:** Ricky Allee | **Date Received:** 10/6/09 |

| **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? | | ✓ | Maximum Counts Observed*: 40 cpm |
| Classified Radioactive II or III by RSO? | | ✓ | |
| COC/Samples marked containing PCBs? | | ✓ | |
| Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#: |
| Samples identified as Foreign Soil? | | ✓ | |

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

Comments: FedEx 9457 3163 0784

PM (or PMA) review: Initials JT Date 10/6/09

# LABORATORY TASK ORDER (LTO) FORM

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

**Event Name:** ISRA Sampling, August 2009 **Start:** 8/24/2009 **End:** 9/30/2009

**LTO DATE:** **LTO NUMBER:**

| | | | |
|---|---|---|---|
| **Consultant Name:** | MWH | **Contract Laboratory:** | GEL |
| Address: | 2121 N. California Blvd. Ste. 600<br>Walnut Creek, CA 94596 | Address: | 2040 Savage Rd.<br>Charleston, SC 29407 |
| **Contact Name:** | Sarah Von Raesfeld | **Lab Contact Name:** | Jackie Trudell |
| Phone Number: | 925-627-4654 | Phone Number: | 843-769-7388 |
| Fax Number: | 925-627-4501 | Fax Number: | 843-766-1178 |
| E-mail Address: | Sarah.VonRaesfeld@mwhglobal.com | E-mail Address: | jacqueline.trudell@gel.com |

## SAMPLE CONTAINER ORDER FORM

**Date Required:**

**Date Sample Pickup:**

**Ship Containers To:**

Project Site _____ *(enter "X")*
Consultant Office _____ *(enter "X")*
Other Location (specify in comments) _____ *(enter "X")*

**Container Information:**

Trip Blank (VOA only) No *(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 X *(select all applicable)*
Water X *(select all applicable)*
Vapor _____ *(select all applicable)*

Est. Total # of Samples: 175 Est. Total # of EDDs 40

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

| | Water | Soil | Contingent |
|---|---|---|---|
| **Dioxins (1613B)** | **15** | **124** | **0** |
| EPA 8015M (DRO) | -- | -- | -- |
| EPA 8015M (JET FUEL) | -- | -- | -- |
| EPA 8015M (CC) | -- | -- | -- |
| **TCE (8260B)** | **5** | **12** | **0** |
| EPA 8270C SIM (SVOC) | -- | -- | -- |
| EPA 8310 (PAH) | -- | -- | -- |
| **EPA 8082 (PCB)** | **3** | **5** | **0** |
| **Nickel (6020)** | **5** | **10** | **0** |
| **Chromium (6020)** | **5** | **10** | **0** |
| **Silver (6020)** | **5** | **10** | **0** |
| **Cadmium (6020)** | **10** | **35** | **0** |
| **Arsenic (6020)** | **5** | **10** | **0** |
| **% Moisture (D2216)** | **0** | **170** | **0** |
| **Lead (6020)** | **10** | **65** | **0** |
| **Copper (6020)** | **10** | **75** | **0** |
| **Zinc (6020)** | **5** | **20** | **0** |
| **Mercury by 7471A/7470A** | **5** | **25** | **0** |

## LABORATORY REPORTING REQUIREMENTS

**Project TAT:**

Normal: X (10 Business days)
RUSH: 5 (Specify- 24 / 48 / 72HRS)
Other : _____ (Specify # of Days)
Report Due Date:

**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)

**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

Send Original Reports To:

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

## SPECIAL INSTRUCTIONS/LTO NOTES

## CONFIRMATION OF TRANSMITTAL & RECEIPT

**LTO Sent By:**

Name: Sarah Von Raesfeld
Date: 09/02/09

**LTO Received By-**

Name:
Date:

Table of Contents

# Case Narrative

**Case Narrative**
**for**
**Boeing - SSFL (MWH)**
**Work Order: 238383**
**SDG: 238383**

**October 12, 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 October 06, 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:

| Laboratory Identification | Sample Description |
|---|---|
| 238383001 | HZET0237S001 |
| 238383002 | HZET0238S001 |
| 238383003 | HZET0239S001 |
| 238383004 | HZET0240S001 |
| 238383005 | HZET0241S001 |

**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 Semivolatile PCB, Metals and Percent Moisture.

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

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 07 October 2009**

| State | Certification |
|---|---|
| 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: 238383

Prepared by

MEC$^X$, 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: | 238383 |
| Project Manager: | Dixie Hambrick |
| Matrix: | soil |
| QC Level: | V |
| No. of Samples: | 5 |
| No. of Reanalyses/Dilutions: | 0 |
| Laboratory: | GEL |

**Table 1. Sample Identification**

| *Sample Name* | *Lab Sample Name* | *Sub-Lab Sample Name* | *Matrix* | *Collection* | *Method* |
|---|---|---|---|---|---|
| | | | | | |
| HZET0237S001 | 238383001 | N/A | Soil | 10/5/2009 1:55:00 PM | 6020, 8082 |
| HZET0238S001 | 238383002 | N/A | Soil | 10/5/2009 2:00:00 PM | 6020, 8082 |
| HZET0239S001 | 238383003 | N/A | Soil | 10/5/2009 2:18:00 PM | 6020, 8082 |
| HZET0240S001 | 238383004 | N/A | Soil | 10/5/2009 2:10:00 PM | 6020, 8082 |
| HZET0241S001 | 238383005 | N/A | Soil | 10/5/2009 2:05:00 PM | 6020, 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°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. If necessary, the client ID was added to the sample result summary by the reviewer.

## Data Qualifier Reference Table

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

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

## Qualification Code Reference Table

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

## Qualification Code Reference Table Cont.

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

# III. Method Analyses

## A. EPA METHOD 6020—Lead

Reviewed By: P. Meeks
Date Reviewed: October 13, 2009

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

- Holding Times: The analytical holding time, six months for ICP-MS, was met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: The recovery was within laboratory-established QC limits.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on HZET0237S001. The RPD was within the method-established control limit.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on HZET0237S001. Both recoveries and the RPD were within laboratory-established QC limits.
- Serial Dilution: A serial dilution analysis was performed on HZET0237S001. The %D was 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 analyses were reported from the laboratory's standard 2× dilution for soils. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: FBQW2239 (235913) was identified as the field blank associated with the samples in this SDG. Lead was not detected in this sample. This SDG had no identified equipment rinsate.

- Field Duplicates: There were no field duplicate samples identified for this SDG.

## B. EPA METHOD 8082—PCBs

Reviewed By: P. Meeks
Date Reviewed: October 13, 2009

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

- Holding Times: Extraction and analytical holding times were met. The soil samples were extracted within 14 days of collection and analyzed within 40 days of extraction.

- Calibration: Review is not applicable at a Level V validation.

- Blanks: The method blank had no target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: 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 HZET0237S001. 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: FBQW2239 (235913) was identified as the field blank associated with the samples in this SDG. There were no detects above the MDL in this sample. This SDG had no identified equipment rinsate.

    - 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. Although not usually reviewed at Level V, the laboratory flagged the Aroclor-1254 result for HZET0239S001 as having an intercolumn %D above 40%. This result was therefore, qualified as estimated, "J."

- 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: 238383

## *Analysis Method 6020*

**Sample Name** HZET0237S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383001 **Sample Date:** 10/5/2009 1:55:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 7.56 | 0.399 | 0.0998 | mg/kg | | | |

**Sample Name** HZET0238S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383002 **Sample Date:** 10/5/2009 2:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 4.19 | 0.401 | 0.1 | mg/kg | | | |

**Sample Name** HZET0239S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383003 **Sample Date:** 10/5/2009 2:18:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 10.2 | 0.418 | 0.105 | mg/kg | | | |

**Sample Name** HZET0240S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383004 **Sample Date:** 10/5/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 8.08 | 0.411 | 0.103 | mg/kg | | | |

**Sample Name** HZET0241S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383005 **Sample Date:** 10/5/2009 2:05:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Lead | 7439921 | 6.07 | 0.41 | 0.102 | mg/kg | | | |

## *Analysis Method 8082*

**Sample Name** HZET0237S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383001 **Sample Date:** 10/5/2009 1:55:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.45 | 3.45 | 1.15 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.45 | 3.45 | 1.15 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.45 | 3.45 | 1.15 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.45 | 3.45 | 1.15 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.45 | 3.45 | 1.15 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.45 | 3.45 | 1.15 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.45 | 3.45 | 1.15 | ug/kg | U | U | |

**Sample Name** HZET0238S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383002 **Sample Date:** 10/5/2009 2:00:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.49 | 3.49 | 1.16 | ug/kg | U | U | |

**Sample Name** HZET0239S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383003 **Sample Date:** 10/5/2009 2:18:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.53 | 3.53 | 1.18 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.53 | 3.53 | 1.18 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.53 | 3.53 | 1.18 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.53 | 3.53 | 1.18 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.53 | 3.53 | 1.18 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 6.7 | 3.53 | 1.18 | ug/kg | P | J | *III |
| Aroclor-1260 | 11096825 | 6.3 | 3.53 | 1.18 | ug/kg | | | |

## *Analysis Method 8082*

**Sample Name** HZET0240S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383004 **Sample Date:** 10/5/2009 2:10:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.58 | 3.58 | 1.19 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.58 | 3.58 | 1.19 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.58 | 3.58 | 1.19 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.58 | 3.58 | 1.19 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.58 | 3.58 | 1.19 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.58 | 3.58 | 1.19 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.58 | 3.58 | 1.19 | ug/kg | U | U | |

**Sample Name** HZET0241S001 **Matrix Type:** Soil **Result Type:** Primary Result

**Lab Sample Name:** 238383005 **Sample Date:** 10/5/2009 2:05:00 PM **Validation Level:** V

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 12674112 | 3.57 | 3.57 | 1.19 | ug/kg | U | U | |
| Aroclor-1221 | 11104282 | 3.57 | 3.57 | 1.19 | ug/kg | U | U | |
| Aroclor-1232 | 11141165 | 3.57 | 3.57 | 1.19 | ug/kg | U | U | |
| Aroclor-1242 | 53469219 | 3.57 | 3.57 | 1.19 | ug/kg | U | U | |
| Aroclor-1248 | 12672296 | 3.57 | 3.57 | 1.19 | ug/kg | U | U | |
| Aroclor-1254 | 11097691 | 3.57 | 3.57 | 1.19 | ug/kg | U | U | |
| Aroclor-1260 | 11096825 | 3.57 | 3.57 | 1.19 | ug/kg | U | U | |