

September 2, 2014

Mr. Weiquan Dong, PE  
Bureau of Corrective Actions, Special Projects Branch  
Nevada Division of Environmental Protection  
2030 E. Flamingo Rd., Suite 230  
Las Vegas, Nevada 89119

**Re: Excavation Summary Report  
GW-11 Intake Structure Construction (Utility Project)  
Nevada Environmental Response Trust Site; Henderson, Nevada**

Dear Mr. Dong:

On behalf of the Nevada Environmental Response Trust (“NERT” or the “Trust”), ENVIRON International Corporation (“ENVIRON”) has prepared this summary of excavation activities performed during utility construction activities at the NERT site in Henderson, Nevada (the “site”). This summary documents the project’s compliance with the provisions of the October 2013 *Site Management Plan, Revision 1* (SMP) for the NERT site. The construction activities involved modifications to the GW-11 intake structure. A work plan describing the planned excavation and related activities was submitted to NDEP on February 19, 2014 and was approved by NDEP on February 20, 2014. This project was defined in the NDEP-approved work plan as a Utility Project and was therefore performed in accordance with Section 4.6 of the SMP. Field activities were performed from February 20, 2014 to June 10, 2014, following which this report has been prepared.

### **Background and Project Summary**

During construction activities for the GW-11 intake structure, soil excavation activities were performed for the installation of a concrete footing. The purpose of the footing, also known as a “deadman”, is to anchor a metal bridge structure, which is attached to the floating platform that secures the pump intake pipeline within the water contained in the pond.

The location of the excavation is within Excavation Control Area (ECA) D3 (encompasses GW-11 and WC ponds and berms) as defined in the SMP. Discolored soil was not observed during the excavation and field screening did not indicate the presence of volatile organic compounds (VOCs). Excavated soil was characterized by collecting stockpile samples and submitting them to a Nevada-certified analytical laboratory, as described below. Based on sample analytical results, the soil was profiled for disposal at the non-hazardous Apex Regional Landfill, operated by Republic Services.

### **Scope of Excavation Summary Report**

Per Section 4.6.3 of the SMP (Documentation of Actions Taken), this report provides the following information:

- An excavation summary;
- A figure depicting the location where any soil was removed;

- GPS coordinates for the limits of excavation within ECAs or in a non-ECA where previously unknown contaminated soils were discovered;
- A summary of laboratory analytical results of excavated soil sampling, as well as a compilation of laboratory analytical data reports and laboratory quality control reports;
- An estimate of the volume—and approximate location—of excavated soil that exceeded soil screening levels, if applicable;
- A summary of excavated soil transported to an off-site disposal facility, including the dates the soil was transported and the estimated quantity of soil transported; and
- Proof of proper disposal of contaminated soil.

### **Excavation Summary and Location**

On February 27, 2014, Rafael Construction dug an excavation 13 feet long, 5 feet wide, and 1.5 feet deep in the top of the eastern side of the GW-11 pond berm. The excavation location and dimensions are shown on Figure 1.

Soil removed from the excavation appeared to consist of sandy silt, uniformly light brown in color, with no evidence of discoloration. ENVIRON field personnel performed field screening of excavated soils and the excavated area for volatile organic compounds (VOCs) using a photoionization detector (PID) and there were no VOC detections. Excavated soil was moved using a dump truck to a location south of the GW-11 Pond and stockpiled on a double layer of plastic sheeting in a flat area. The stockpile was covered with a double layer of plastic sheeting and secured with sand bags and staples. The excavation was not backfilled with soil since concrete was poured into the excavation to construct the deadman on February 28, 2014. A photographic log is presented in Attachment A.

### **Coordinates for Limits of Excavation**

Excavation limits are shown on Figure 1. The coordinates of the four corners of the rectangular excavation are as follows:

*Northwest corner:*     36° 02' 59.53" N  
                                  115° 00' 15.50" W

*Northeast corner:*     36° 02' 59.53" N  
                                  115° 00' 15.43" W

*Southeast corner:*     36° 02' 59.40" N  
                                  115° 00' 15.43" W

*Southwest corner:*     36° 02' 59.40" N  
                                  115° 00' 15.50" W

The depth of the excavation was 1.5 feet. The bottom of the excavation corresponds to an elevation of approximately 1747.5 feet above mean sea level (amsl).

### **Estimation of Excavated Soil Volume**

The excavation dimensions were used to calculate an in-place compacted volume of approximately 3.6 cubic yards of soil. Adding a “fluff factor” of 35%, the excavated soil volume was approximately 4.9 cubic yards.<sup>1</sup> This volume is consistent with ENVIRON’s observations of the soil stockpile.

### **Summary of Laboratory Analytical Results**

Initial stockpile sampling was performed on February 27, 2014 with additional sampling performed on May 6, 2014. During each sampling event, a four-point composite sample, representative of the entire volume of the excavated soil, was collected by filling laboratory-provided sample jars with soil from four randomly chosen portions of the soil stockpile. The sample jars were immediately sealed, labeled, placed in zip-closure plastic bags, and stored on ice in an insulated container. The sample coolers were shipped via overnight delivery to Test America Laboratories under chain-of-custody documentation.

The first composite sample was requested to be analyzed for the following chemicals of potential concern (COPCs) as identified by Table B-1 of Appendix B of the SMP:

- Asbestos was analyzed by EPA Method 600R-93-116
- Metals including arsenic, boron, chromium, magnesium, manganese, and iron were analyzed by EPA Method 6010B
- Hexavalent chromium was analyzed by EPA Method 7199
- Dioxins/Furans were analyzed by EPA Method 8290
- VOCs were analyzed by EPA Method 8260B
- Hexachlorobenzene (HCB) was analyzed by EPA Method 8270C
- Organochlorine Pesticides including dichlorodiphenyltrichloroethane (DDT) and Beta-benzene hexachloride (Beta-BHC) were analyzed by EPA Method 8081A
- Perchlorate was analyzed by EPA Method 314.0
- pH was analyzed by EPA Method 9045D

The second sampling event was performed to satisfy the disposal facility’s request for Toxicity Characteristic Leaching Procedure (TCLP) data for HCB, based on the concentration of HCB reported in the initial composite sample. Re-sampling was required in order to meet the sample hold time required by the analytical method for HCB analysis. Laboratory methods used include:

- TCLP extraction was performed by EPA Method 1311
- TCLP HCB was analyzed by EPA Method 8270C

A summary of analytical results is provided in Table 1. Analytical results indicated that of all constituents tested, only dioxins/furans and HCB were present at concentrations above site cleanup

---

<sup>1</sup> Since composite soil samples were collected to be representative of the entire volume of soil excavated, the volume estimate provided is also the estimated volume of excavated soil which exceeded the site-specific cleanup criteria.

criteria, reported at 19,000 picograms/gram and 22 mg/kg, respectively. In addition, all constituents tested were present at levels below characteristic hazardous waste thresholds. While total HCB was present at a concentration greater than 20 times the TCLP value in the initial stockpile sample (indicating that leaching tests should be performed to assess the potential for the material to be characterized as hazardous waste), the TCLP result was non-detect. Laboratory analytical reports are provided in Attachment B.

### **Waste Characterization and Disposal**

ENVIRON's review of the laboratory analytical results indicated that the soil could be profiled as non-hazardous waste. A special waste profile was completed by ENVIRON, including the analytical results of composite samples collected from the soil stockpile. The profile was submitted to Republic Services on May 19, 2014 and was approved on May 21, 2014. The special waste profile is provided in Attachment C.

Non-hazardous waste manifests were prepared by Republic Services and provided to ENVIRON for signature on behalf of the Trust as the Generator. ENVIRON signed the manifests and returned them to Rafael Construction to accompany the soil during transport to Apex Regional Landfill. The non-hazardous waste manifests (generator copies) are provided as Attachment D.

Soil disposal occurred on June 6 and June 10, 2014, with one truckload being disposed at Apex Regional Landfill on each day. Two truckloads were disposed and the weight of the two loads of soil were 6.99 tons (June 6 load) and 7.31 tons (June 10 load), for a total weight of 14.3 tons. Landfill disposal receipts are provided in Attachment E.

### **Closure**


ENVIRON notes that, per Section 4.6.3 of the SMP, this report was due to NDEP 45 business days following completion of the project, or August 13, 2014. We apologize for this oversight.

Should you have any questions concerning this excavation report, please contact John Pekala at (602) 734-7710 or [jpekala@environcorp.com](mailto:jpekala@environcorp.com). Thank you.

Sincerely,



John M. Pekala, PG  
Senior Manager  
Nevada CEM #2347, exp. 9/20/2016



Allan J. DeLorme, PE  
Principal

Attachments

Table 1: Soil Stockpile Analytical Results

Figure 1: Excavation of Bridge Footing, GW-11 Pond Intake Structure

Attachment A: Photographic Log

Attachment B: Laboratory Analytical Results

Attachment C: Special Waste Profile

Attachment D: Non-Hazardous Waste Manifests

Attachment E: Landfill Soil Disposal Receipts

cc: BMI Compliance Coordinator, NDEP, BCA, Las Vegas

ec: Greg Lovato, NDEP  
James Dotchin, NDEP  
Wayne Klomp, NDEP  
Nevada Environmental Response Trust  
Tanya O'Neill, Foley and Lardner LLP

**Table 1: Soil Stockpile Analytical Results**  
**GW-11 Intake Structure Excavation Summary**  
**Nevada Environmental Response Trust (NERT) Site; Henderson, NV**

Analyte Group	Analyte	Initial Stockpile Sample	Second Stockpile Sample	Site-Specific Cleanup Criteria <sup>1</sup>
		mg/kg	mg/kg	mg/kg
Metals	Arsenic	3.9	--	7.2
	Boron	11	--	100,000
	Chromium	16	--	100,000
	Chromium VI	0.32	--	1,360
	Magnesium	17,000	--	100,000
	Manganese	500	--	24,900
	Iron	19,000	--	100,000
Perchlorate	Perchlorate	63	--	795
Dioxins/Furans	Dioxin TEQ	<b>19,000 pg/g</b>	--	2,700 pg/g
VOCs	VOCs	All ND	--	Various
SVOCs	HCB	<b>22</b>	--	1.2
	TCLP HCB	--	ND<0.05 mg/L	N/A
Organochlorine	4,4-DDT	ND<0.025	--	7.81
Pesticides	beta-BHC	0.48	--	53.9
Wet Chemistry	pH	8 pH units	--	na
Asbestos	Bulk Asbestos	No Fibers Detected	--	na

Notes

The initial and second soil stockpile samples were both collected as 4-point composites. The samples were collected on February 27, 2014 and May 6, 2014, respectively.

All results are presented in mg/kg except where noted.

Results that exceed site-specific cleanup criteria are presented in bold.

HCB: hexachlorobenzene

VOCs: volatile organic compounds

TCLP: Toxicity Characteristic Leaching Procedure

TEQ: Toxicity equivalent

mg/L: milligrams per liter

mg/kg: milligrams per kilogram

pg/g: picograms per gram

na: not available

N/A: not applicable

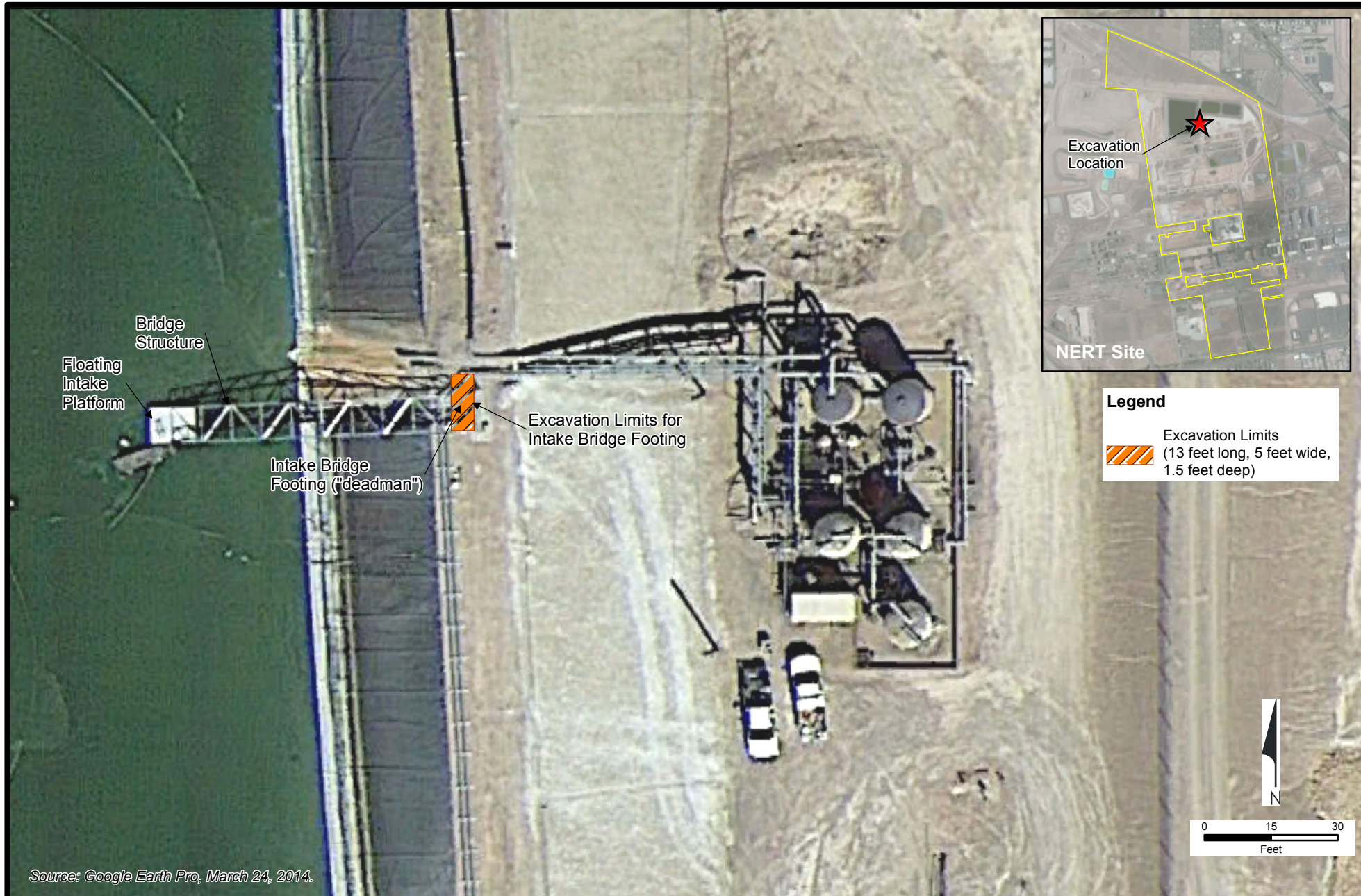
ND<##: not detected at or above the laboratory reporting limit shown

1: based on August 2013 NDEP Basic Comparison Levels (BCLs) except for arsenic and dioxins/furans. The criteria for arsenic is based on typical natural background concentration as approved by NDEP on August 20, 2010 (NDEP 2010a). The criteria for dioxins/furans is a site-specific value as approved by NDEP on May 25, 2010 (NDEP 2010b).

References

NDEP, 2010a. Letter to Tronox LLC re: Response to: Errata to the Removal Action Work Plan for Phase B Soil Remediation of Remediation Zones RZ-B through RZ-E, dated August 13, 2010. August 20, 2010.

NDEP, 2010b. Letter to Tronox LLC re: Response to: Results of Bioaccessibility Study for Dioxin/Furans in Soil, Tronox LLC, Henderson, Nevada (Revised), dated May 24, 2010. May 25, 2010.



**Excavation of Bridge Footing GW-11 Pond Intake Structure**  
 Nevada Environmental Response Trust  
 Henderson, Nevada

Figure

**1**

**Attachment A**  
**Photographic Log**





Photo 1: Facing north. View of eastern berm roadway prior to construction and excavation activities.



Photo 2: Facing east. View of the excavation in progress.



**Site Photographs**

Excavation Summary Report, GW-11 Intake Modifications  
Nevada Environmental Response Trust, Henderson, NV  
February – May 2014



Photo 3: Facing northeast. View of the excavation in progress.



Photo 4: Facing south. View of the excavation in progress.



### Site Photographs

Excavation Summary Report, GW-11 Intake Modifications  
Nevada Environmental Response Trust, Henderson, NV  
February – May 2014



Photo 5: Facing southeast. View of the completed bridge footing structure.



Photo 6: Facing west. View of the completed floating dock control arm and HDPE intake pipe.



Photo 7: Sample jars after stockpile composite sampling on May 6, 2014.



Photo 8: Facing north-northeast. View of the soil stockpile immediately following the second stockpile sampling event.



**Attachment B**  
**Laboratory Analytical Reports**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-71600-1

Client Project/Site: GW-11 EQ Excavation

Revision: 1

For:

ENVIRON International Corp.

7310 Turfway Road

Suite 550

Florence, Kentucky 41042

Attn: Todd Lusk



Authorized for release by:

4/1/2014 9:46:38 AM

Sushmitha Reddy, Senior Project Manager

(949)261-1022

[sushmitha.reddy@testamericainc.com](mailto:sushmitha.reddy@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	6
Method Summary . . . . .	9
Toxicity Summary . . . . .	10
Lab Chronicle . . . . .	11
QC Sample Results . . . . .	12
QC Association Summary . . . . .	25
Definitions/Glossary . . . . .	28
Certification Summary . . . . .	30
Subcontract Data . . . . .	31
Chain of Custody . . . . .	33
Receipt Checklists . . . . .	36
Isotope Dilution Summary . . . . .	38

# Sample Summary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-71600-2	GW-11-EQ-EXCAV-Composite	Solid	02/27/14 11:00	02/28/14 10:15

---

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16



# Case Narrative

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Job ID: 440-71600-1

Laboratory: TestAmerica Irvine

### Narrative

#### Job Narrative 440-71600-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 2/28/2014 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

#### GC/MS VOA

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with batch 166692 were outside control limits: (440-71469-1 MS). The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 166692 recovered above the upper control limit for 2,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCVIS 440-166692/2).

No other analytical or quality issues were noted.

#### GC/MS Semi VOA

Method(s) 8270C: The following sample(s) required a dilution due to the nature of the sample matrix: GW-11-EQ-EXCAV-Composite (440-71600-2). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No other analytical or quality issues were noted.

#### HPLC

Method(s) 314.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with batch 167746 in perchlorate were outside control limits: (440-71600-2 MS), (440-71600-2 MSD). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

#### GC Semi VOA

Method(s) 8081A: The following sample(s) was diluted due to the nature of the sample matrix: GW-11-EQ-EXCAV-Composite (440-71600-2). Elevated reporting limits (RLs) are provided.

Method(s) 8081A: Surrogate recovery for the following sample(s) was outside control limits: GW-11-EQ-EXCAV-Composite (440-71600-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

#### Dioxin

Method(s) 8290: The method blank for extraction batch 37800 contained 1,2,3,4,6,7,8-HpCDF above the reporting limit (RL). The associated sample was not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 8290: The ion abundance ratio for the Isotope Dilution Analyte (IDA) 13C-1,2,3,4,6,7,8-HpCDF was outside criteria in the following sample: GW-11-EQ-EXCAV-Composite (440-71600-2). The theoretical area for the IDA was used to quantitate it's recovery which was within acceptance limits..

Method(s) 8290: Many analytes have elevated reporting limits due to matrix interference. The analytes are flagged with the "G" qualifier. GW-11-EQ-EXCAV-Composite (440-71600-2)

Method(s) 8290: The majority of analytes in the following sample: GW-11-EQ-EXCAV-Composite (440-71600-2) had concentrations that

## Case Narrative

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

---

### Job ID: 440-71600-1 (Continued)

---

#### Laboratory: TestAmerica Irvine (Continued)

exceeded the Initial Calibration (ICAL) range; these analytes are flagged with the "E" qualifier. Several analytes had peaks that saturated the instrument detector as well; these analytes are flagged with the "cn" qualifier. Saturated peak results should be treated as the estimated minimum possible concentration present in the sample.

Further injections of the sample, either at a dilution or for confirmation of the 2,3,7,8-TCDF result, were not performed due to the severity of the sample matrix and the potential for harm to the sensitive high resolution instrumentation. As per the client, results for this sample are reported from this single undiluted injection..

No other analytical or quality issues were noted.

#### Metals

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for boron for batch 166528 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6010B: The method blank for batch 166528 contained magnesium above the reporting limit (RL). Associated sample was not re-extracted or re-analyzed because results were greater than 10X the value found in the method blank. GW-11-EQ-EXCAV-Composite (440-71600-2)

No other analytical or quality issues were noted.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Subcontract Work

Method Asbestos PLM 600/R-93-116.: This method was subcontracted to EMLab - Irvine. The subcontract certification is different from those listed on the TestAmerica cover page of this final report.

# Client Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

**Client Sample ID: GW-11-EQ-EXCAV-Composite**

**Lab Sample ID: 440-71600-2**

**Date Collected: 02/27/14 11:00**

**Matrix: Solid**

**Date Received: 02/28/14 10:15**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
1,1,1-Trichloroethane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,1,2,2-Tetrachloroethane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,1,2-Trichloroethane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,1-Dichloroethane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,1-Dichloroethene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
1,1-Dichloropropene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,2,3-Trichlorobenzene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
1,2,3-Trichloropropane	ND		10	1.0	ug/Kg			03/05/14 11:12	1
1,2,4-Trichlorobenzene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
1,2,4-Trimethylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.0	ug/Kg			03/05/14 11:12	1
1,2-Dichlorobenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,2-Dichloroethane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,2-Dichloropropane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,3,5-Trimethylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,3-Dichlorobenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,3-Dichloropropane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
1,4-Dichlorobenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
2,2-Dichloropropane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
2-Chlorotoluene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
4-Chlorotoluene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Benzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Bromobenzene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Bromoform	ND		5.0	2.0	ug/Kg			03/05/14 11:12	1
Bromomethane	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Carbon tetrachloride	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Chlorobenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Chloroethane	ND		5.0	2.0	ug/Kg			03/05/14 11:12	1
Chloroform	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Chloromethane	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
cis-1,2-Dichloroethene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
cis-1,3-Dichloropropene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Dibromomethane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Dichlorodifluoromethane	ND		5.0	2.0	ug/Kg			03/05/14 11:12	1
Ethylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Hexachlorobutadiene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Isopropylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
m,p-Xylene	ND		4.0	2.0	ug/Kg			03/05/14 11:12	1
Methylene Chloride	ND		20	5.0	ug/Kg			03/05/14 11:12	1
Naphthalene	ND		5.0	2.0	ug/Kg			03/05/14 11:12	1
n-Butylbenzene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
N-Propylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
o-Xylene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
sec-Butylbenzene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Styrene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
tert-Butylbenzene	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Tetrachloroethene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Toluene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1

TestAmerica Irvine

# Client Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

**Client Sample ID: GW-11-EQ-EXCAV-Composite**

**Lab Sample ID: 440-71600-2**

**Date Collected: 02/27/14 11:00**

**Matrix: Solid**

**Date Received: 02/28/14 10:15**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
trans-1,3-Dichloropropene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Trichloroethene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Trichlorofluoromethane	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Vinyl chloride	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
1,2-Dibromoethane (EDB)	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Bromochloromethane	ND		5.0	1.0	ug/Kg			03/05/14 11:12	1
Bromodichloromethane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Dibromochloromethane	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
p-Isopropyltoluene	ND		2.0	1.0	ug/Kg			03/05/14 11:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		79 - 123					03/05/14 11:12	1
4-Bromofluorobenzene (Surr)	117		79 - 120					03/05/14 11:12	1
Dibromofluoromethane (Surr)	112		60 - 120					03/05/14 11:12	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	2200		3300	690	ug/Kg		03/03/14 13:41	03/06/14 20:37	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		35 - 120				03/03/14 13:41	03/06/14 20:37	10
2-Fluorophenol (Surr)	64		25 - 120				03/03/14 13:41	03/06/14 20:37	10
2,4,6-Tribromophenol (Surr)	61		35 - 125				03/03/14 13:41	03/06/14 20:37	10
Nitrobenzene-d5 (Surr)	66		30 - 120				03/03/14 13:41	03/06/14 20:37	10
Terphenyl-d14 (Surr)	80		40 - 135				03/03/14 13:41	03/06/14 20:37	10
Phenol-d6 (Surr)	64		35 - 120				03/03/14 13:41	03/06/14 20:37	10

## Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	ND		25	7.5	ug/Kg		03/03/14 13:26	03/04/14 18:31	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	170	X	35 - 115				03/03/14 13:26	03/04/14 18:31	5
DCB Decachlorobiphenyl (Surr)	8739	X	45 - 120				03/03/14 13:26	03/04/14 18:31	5

## Method: 8081A - Organochlorine Pesticides (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
beta-BHC	480		250	75	ug/Kg		03/03/14 13:26	03/04/14 19:00	50

## Method: 314.0 - Perchlorate (IC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	63		4.0	0.95	mg/Kg			03/10/14 16:42	100

## Method: 7199 - Chromium, Hexavalent (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.32	J	0.81	0.20	mg/Kg		03/12/14 21:01	03/14/14 09:49	10

## Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	770	G E	24	24	pg/g		03/06/14 12:44	03/08/14 02:22	1
2,3,7,8-TCDF	29000	G E B cn	10	10	pg/g		03/06/14 12:44	03/08/14 02:22	1

TestAmerica Irvine

# Client Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

**Client Sample ID: GW-11-EQ-EXCAV-Composite**

**Lab Sample ID: 440-71600-2**

Date Collected: 02/27/14 11:00

Matrix: Solid

Date Received: 02/28/14 10:15

**Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)**

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	2100	G E	35	35	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,7,8-PeCDF	28000	G E B cn	91	91	pg/g		03/06/14 12:44	03/08/14 02:22	1
2,3,4,7,8-PeCDF	17000	G E B	95	95	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,4,7,8-HxCDD	1900	G	6.6	6.6	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,6,7,8-HxCDD	3200	G E	5.2	5.2	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,7,8,9-HxCDD	3500	E	5.0	5.0	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,4,7,8-HxCDF	20000	G E B cn	110	110	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,6,7,8-HxCDF	21000	G E B cn	90	90	pg/g		03/06/14 12:44	03/08/14 02:22	1
2,3,4,6,7,8-HxCDF	6900	G E B	100	100	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,7,8,9-HxCDF	6800	G E	110	110	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,4,6,7,8-HpCDD	11000	G E B	5.4	5.4	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,4,6,7,8-HpCDF	17000	G E B cn	160	160	pg/g		03/06/14 12:44	03/08/14 02:22	1
1,2,3,4,7,8,9-HpCDF	45000	G E cn	190	190	pg/g		03/06/14 12:44	03/08/14 02:22	1
OCDD	11000	E B	9.9	6.4	pg/g		03/06/14 12:44	03/08/14 02:22	1
OCDF	140000	G E B cn	78	78	pg/g		03/06/14 12:44	03/08/14 02:22	1
Total TCDD	24000	G E	24	24	pg/g		03/06/14 12:44	03/08/14 02:22	1
Total TCDF	230000	G q B cn E	10	10	pg/g		03/06/14 12:44	03/08/14 02:22	1
Total PeCDD	24000	G E	35	35	pg/g		03/06/14 12:44	03/08/14 02:22	1
Total PeCDF	230000	G q B cn E	93	93	pg/g		03/06/14 12:44	03/08/14 02:22	1
Total HxCDD	25000	G q E	5.6	5.6	pg/g		03/06/14 12:44	03/08/14 02:22	1
Total HxCDF	210000	G q B cn E	100	100	pg/g		03/06/14 12:44	03/08/14 02:22	1
Total HpCDD	17000	G B E	5.4	5.4	pg/g		03/06/14 12:44	03/08/14 02:22	1
Total HpCDF	130000	G q B cn E	170	170	pg/g		03/06/14 12:44	03/08/14 02:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		40 - 135				03/06/14 12:44	03/08/14 02:22	1
13C-2,3,7,8-TCDF	75		40 - 135				03/06/14 12:44	03/08/14 02:22	1
13C-1,2,3,7,8-PeCDD	75		40 - 135				03/06/14 12:44	03/08/14 02:22	1
13C-1,2,3,7,8-PeCDF	83		40 - 135				03/06/14 12:44	03/08/14 02:22	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 135				03/06/14 12:44	03/08/14 02:22	1
13C-1,2,3,4,7,8-HxCDF	103		40 - 135				03/06/14 12:44	03/08/14 02:22	1
13C-1,2,3,4,6,7,8-HpCDD	80		40 - 135				03/06/14 12:44	03/08/14 02:22	1
13C-1,2,3,4,6,7,8-HpCDF	67	q	40 - 135				03/06/14 12:44	03/08/14 02:22	1
13C-OCDD	85		40 - 135				03/06/14 12:44	03/08/14 02:22	1

**Method: 6010B - Metals (ICP) - Solid Matrix**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.9		3.0	1.5	mg/Kg		03/04/14 14:56	03/05/14 12:52	5
Boron	11		5.0	2.5	mg/Kg		03/04/14 14:56	03/05/14 12:52	5
Chromium	16		1.0	0.50	mg/Kg		03/04/14 14:56	03/05/14 12:52	5
Iron	19000	B	10	5.0	mg/Kg		03/04/14 14:56	03/05/14 12:52	5
Magnesium	17000	B	10	5.0	mg/Kg		03/04/14 14:56	03/05/14 12:52	5
Manganese	500		2.0	1.0	mg/Kg		03/04/14 14:56	03/05/14 12:52	5

**General Chemistry - Soluble**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.00		0.100	0.100	SU			03/04/14 09:31	1
Oxidation Reduction Potential	420		0.10	0.10	millivolts			03/04/14 09:46	1

TestAmerica Irvine

# Method Summary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8081A	Organochlorine Pesticides (GC)	SW846	TAL IRV
314.0	Perchlorate (IC)	EPA	TAL IRV
7199	Chromium, Hexavalent (IC)	SW846	TAL IRV
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
6010B	Metals (ICP) - Solid Matrix	SW846	TAL IRV
9045C	pH	SW846	TAL IRV
SM 2580B	Reduction-Oxidation (REDOX) Potential	SM	TAL IRV
Asbestos PLM 600/R-93-116.	Asbestos	NONE	EMLab

#### Protocol References:

EPA = US Environmental Protection Agency

NONE = NONE

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

EMLab = EMLab - Irvine, Bascom Airport Executive Suites, 17461 Derian Ave, Suite 100, Irvine, CA 92614

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Toxicity Summary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

Client Sample ID: GW-11-EQ-EXCAV-Composite

Lab Sample ID: 440-71600-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		19000	TEQ
Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	770	G E	24	24	pg/g	1	770	8290
2,3,7,8-TCDF	29000	G E B cn	10	10	pg/g	0.1	2900	8290
1,2,3,7,8-PeCDD	2100	G E	35	35	pg/g	1	2100	8290
1,2,3,7,8-PeCDF	28000	G E B cn	91	91	pg/g	0.03	840	8290
2,3,4,7,8-PeCDF	17000	G E B	95	95	pg/g	0.3	5100	8290
1,2,3,4,7,8-HxCDD	1900	G	6.6	6.6	pg/g	0.1	190	8290
1,2,3,6,7,8-HxCDD	3200	G E	5.2	5.2	pg/g	0.1	320	8290
1,2,3,7,8,9-HxCDD	3500	E	5.0	5.0	pg/g	0.1	350	8290
1,2,3,4,7,8-HxCDF	20000	G E B cn	110	110	pg/g	0.1	2000	8290
1,2,3,6,7,8-HxCDF	21000	G E B cn	90	90	pg/g	0.1	2100	8290
2,3,4,6,7,8-HxCDF	6900	G E B	100	100	pg/g	0.1	690	8290
1,2,3,7,8,9-HxCDF	6800	G E	110	110	pg/g	0.1	680	8290
1,2,3,4,6,7,8-HpCDD	11000	G E B	5.4	5.4	pg/g	0.01	110	8290
1,2,3,4,6,7,8-HpCDF	17000	G E B cn	160	160	pg/g	0.01	170	8290
1,2,3,4,7,8,9-HpCDF	45000	G E cn	190	190	pg/g	0.01	450	8290
OCDD	11000	E B	9.9	6.4	pg/g	0.0003	3.3	8290
OCDF	140000	G E B cn	78	78	pg/g	0.0003	42	8290

**TEF Reference:**

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

# Lab Chronicle

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

**Client Sample ID: GW-11-EQ-EXCAV-Composite**

**Lab Sample ID: 440-71600-2**

**Date Collected: 02/27/14 11:00**

**Matrix: Solid**

**Date Received: 02/28/14 10:15**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5.01 g	10 mL	166692	03/05/14 11:12	AL	TAL IRV
Total/NA	Prep	3546			15.16 g	1 mL	166162	03/03/14 13:41	HN	TAL IRV
Total/NA	Analysis	8270C		10	15.16 g	1 mL	167137	03/06/14 20:37	AI	TAL IRV
Total/NA	Prep	3546			15.02 g	2 mL	165920	03/03/14 13:26	AC	TAL IRV
Total/NA	Analysis	8081A		5	15.02 g	2 mL	166473	03/04/14 18:31	KS	TAL IRV
Total/NA	Prep	3546	DL		15.02 g	2 mL	165920	03/03/14 13:26	AC	TAL IRV
Total/NA	Analysis	8081A	DL	50	15.02 g	2 mL	166473	03/04/14 19:00	KS	TAL IRV
Soluble	Leach	DI Leach			4.01 g	40 mL	167417	03/07/14 10:48	CH	TAL IRV
Soluble	Analysis	314.0		100	1 mL		167746	03/10/14 16:42	CH	TAL IRV
Total/NA	Prep	3060A			1.24 g	50 mL	168699	03/12/14 21:01	NC	TAL IRV
Total/NA	Analysis	7199		10	1.24 g	50 mL	169080	03/14/14 09:49	NC	TAL IRV
Total/NA	Prep	8290			10.09 g	20 uL	37800	03/06/14 12:44	DXD	TAL SAC
Total/NA	Analysis	8290		1	10.09 g	20 uL	38001	03/08/14 02:22	SHK	TAL SAC
Total/NA	Prep	3050B			2.00 g	50 mL	166528	03/04/14 14:56	DT	TAL IRV
Total/NA	Analysis	6010B		5	2.00 g	50 mL	166812	03/05/14 12:52	EN	TAL IRV
Soluble	Leach	DI Leach			20.06 g	20 mL	166355	03/04/14 08:42	NT	TAL IRV
Soluble	Analysis	9045C		1		20 mL	166386	03/04/14 09:31	NT	TAL IRV
Soluble	Leach	DI Leach			20.06 g	20 mL	166355	03/04/14 08:42	NT	TAL IRV
Soluble	Analysis	SM 2580B		1		20 mL	166387	03/04/14 09:46	NT	TAL IRV

**Laboratory References:**

EMLab = EMLab - Irvine, Bascom Airport Executive Suites, 17461 Derian Ave, Suite 100, Irvine, CA 92614

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-166692/4**

**Matrix: Solid**

**Analysis Batch: 166692**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
1,1,1-Trichloroethane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,1,2,2-Tetrachloroethane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,1,2-Trichloroethane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,1-Dichloroethane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,1-Dichloroethene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
1,1-Dichloropropene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,2,3-Trichlorobenzene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
1,2,3-Trichloropropane	ND		10	1.0	ug/Kg			03/05/14 07:55	1
1,2,4-Trichlorobenzene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
1,2,4-Trimethylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.0	ug/Kg			03/05/14 07:55	1
1,2-Dichlorobenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,2-Dichloroethane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,2-Dichloropropane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,3,5-Trimethylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,3-Dichlorobenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,3-Dichloropropane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
1,4-Dichlorobenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
2,2-Dichloropropane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
2-Chlorotoluene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
4-Chlorotoluene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Benzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Bromobenzene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Bromoform	ND		5.0	2.0	ug/Kg			03/05/14 07:55	1
Bromomethane	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Carbon tetrachloride	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Chlorobenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Chloroethane	ND		5.0	2.0	ug/Kg			03/05/14 07:55	1
Chloroform	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Chloromethane	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
cis-1,2-Dichloroethene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
cis-1,3-Dichloropropene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Dibromomethane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Dichlorodifluoromethane	ND		5.0	2.0	ug/Kg			03/05/14 07:55	1
Ethylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Hexachlorobutadiene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Isopropylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
m,p-Xylene	ND		4.0	2.0	ug/Kg			03/05/14 07:55	1
Methylene Chloride	ND		20	5.0	ug/Kg			03/05/14 07:55	1
Naphthalene	ND		5.0	2.0	ug/Kg			03/05/14 07:55	1
n-Butylbenzene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
N-Propylbenzene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
o-Xylene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
sec-Butylbenzene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Styrene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
tert-Butylbenzene	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Tetrachloroethene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-166692/4**

**Matrix: Solid**

**Analysis Batch: 166692**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
trans-1,2-Dichloroethene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
trans-1,3-Dichloropropene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Trichloroethene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Trichlorofluoromethane	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Vinyl chloride	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
1,2-Dibromoethane (EDB)	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Bromochloromethane	ND		5.0	1.0	ug/Kg			03/05/14 07:55	1
Bromodichloromethane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
Dibromochloromethane	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1
p-Isopropyltoluene	ND		2.0	1.0	ug/Kg			03/05/14 07:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		79 - 123		03/05/14 07:55	1
4-Bromofluorobenzene (Surr)	116		79 - 120		03/05/14 07:55	1
Dibromofluoromethane (Surr)	111		60 - 120		03/05/14 07:55	1

**Lab Sample ID: LCS 440-166692/5**

**Matrix: Solid**

**Analysis Batch: 166692**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	54.8		ug/Kg		110	70 - 130
1,1,1-Trichloroethane	50.0	52.8		ug/Kg		106	65 - 135
1,1,1,2,2-Tetrachloroethane	50.0	55.1		ug/Kg		110	55 - 140
1,1,2-Trichloroethane	50.0	54.4		ug/Kg		109	65 - 135
1,1-Dichloroethane	50.0	48.9		ug/Kg		98	70 - 130
1,1-Dichloroethene	50.0	52.1		ug/Kg		104	70 - 125
1,1-Dichloropropene	50.0	54.0		ug/Kg		108	70 - 130
1,2,3-Trichlorobenzene	50.0	52.9		ug/Kg		106	60 - 130
1,2,3-Trichloropropane	50.0	54.8		ug/Kg		110	60 - 135
1,2,4-Trichlorobenzene	50.0	54.4		ug/Kg		109	70 - 135
1,2,4-Trimethylbenzene	50.0	56.1		ug/Kg		112	70 - 125
1,2-Dibromo-3-Chloropropane	50.0	61.0		ug/Kg		122	50 - 135
1,2-Dichlorobenzene	50.0	53.2		ug/Kg		106	75 - 120
1,2-Dichloroethane	50.0	61.3		ug/Kg		123	60 - 140
1,2-Dichloropropane	50.0	52.6		ug/Kg		105	70 - 130
1,3,5-Trimethylbenzene	50.0	55.1		ug/Kg		110	70 - 125
1,3-Dichlorobenzene	50.0	50.1		ug/Kg		100	75 - 125
1,3-Dichloropropane	50.0	51.0		ug/Kg		102	70 - 125
1,4-Dichlorobenzene	50.0	50.8		ug/Kg		102	75 - 120
2,2-Dichloropropane	50.0	61.0		ug/Kg		122	60 - 145
2-Chlorotoluene	50.0	50.3		ug/Kg		101	70 - 125
4-Chlorotoluene	50.0	52.8		ug/Kg		106	75 - 125
Benzene	50.0	46.8		ug/Kg		94	65 - 120
Bromobenzene	50.0	52.9		ug/Kg		106	75 - 120
Bromoform	50.0	61.5		ug/Kg		123	55 - 135
Bromomethane	50.0	46.3		ug/Kg		93	60 - 145

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-166692/5**

**Matrix: Solid**

**Analysis Batch: 166692**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	50.0	55.3		ug/Kg		111	65 - 140
Chlorobenzene	50.0	50.0		ug/Kg		100	75 - 120
Chloroethane	50.0	43.3		ug/Kg		87	60 - 140
Chloroform	50.0	54.2		ug/Kg		108	70 - 130
Chloromethane	50.0	41.2		ug/Kg		82	45 - 145
cis-1,2-Dichloroethene	50.0	52.4		ug/Kg		105	70 - 125
cis-1,3-Dichloropropene	50.0	59.3		ug/Kg		119	75 - 125
Dibromomethane	50.0	58.4		ug/Kg		117	70 - 130
Dichlorodifluoromethane	50.0	53.5		ug/Kg		107	35 - 160
Ethylbenzene	50.0	52.6		ug/Kg		105	70 - 125
Hexachlorobutadiene	50.0	48.1		ug/Kg		96	60 - 135
Isopropylbenzene	50.0	52.4		ug/Kg		105	75 - 130
m,p-Xylene	100	104		ug/Kg		104	70 - 125
Methylene Chloride	50.0	50.9		ug/Kg		102	55 - 135
Naphthalene	50.0	58.8		ug/Kg		118	55 - 135
n-Butylbenzene	50.0	52.0		ug/Kg		104	70 - 130
N-Propylbenzene	50.0	51.9		ug/Kg		104	70 - 130
o-Xylene	50.0	51.9		ug/Kg		104	70 - 125
sec-Butylbenzene	50.0	51.5		ug/Kg		103	70 - 125
Styrene	50.0	54.3		ug/Kg		109	75 - 130
tert-Butylbenzene	50.0	54.4		ug/Kg		109	70 - 125
Tetrachloroethene	50.0	50.3		ug/Kg		101	70 - 125
Toluene	50.0	50.9		ug/Kg		102	70 - 125
trans-1,2-Dichloroethene	50.0	52.1		ug/Kg		104	70 - 125
trans-1,3-Dichloropropene	50.0	62.1		ug/Kg		124	70 - 135
Trichloroethene	50.0	52.7		ug/Kg		105	70 - 125
Trichlorofluoromethane	50.0	71.2		ug/Kg		142	60 - 145
Vinyl chloride	50.0	42.2		ug/Kg		84	55 - 135
1,2-Dibromoethane (EDB)	50.0	54.5		ug/Kg		109	70 - 130
Bromochloromethane	50.0	54.3		ug/Kg		109	70 - 135
Bromodichloromethane	50.0	58.7		ug/Kg		117	70 - 135
Dibromochloromethane	50.0	57.3		ug/Kg		115	65 - 140
p-Isopropyltoluene	50.0	53.9		ug/Kg		108	75 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	106		79 - 123
4-Bromofluorobenzene (Surr)	110		79 - 120
Dibromofluoromethane (Surr)	107		60 - 120

**Lab Sample ID: 440-71469-B-1 MS**

**Matrix: Solid**

**Analysis Batch: 166692**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		49.5	54.8		ug/Kg		111	65 - 145
1,1,1-Trichloroethane	42		49.5	96.4		ug/Kg		110	65 - 145
1,1,2,2-Tetrachloroethane	ND		49.5	55.5		ug/Kg		112	40 - 160
1,1,2-Trichloroethane	8.3		49.5	64.3		ug/Kg		113	65 - 140

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-71469-B-1 MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 166692

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1-Dichloroethane	3.0		49.5	49.5		ug/Kg		94	65 - 135
1,1-Dichloroethene	30		49.5	87.1		ug/Kg		115	65 - 135
1,1-Dichloropropene	ND		49.5	52.6		ug/Kg		106	65 - 135
1,2,3-Trichlorobenzene	ND		49.5	54.1		ug/Kg		109	45 - 145
1,2,3-Trichloropropane	ND		49.5	55.4		ug/Kg		112	50 - 150
1,2,4-Trichlorobenzene	ND		49.5	55.9		ug/Kg		113	50 - 140
1,2,4-Trimethylbenzene	ND		49.5	56.8		ug/Kg		115	65 - 140
1,2-Dibromo-3-Chloropropane	ND		49.5	61.7		ug/Kg		125	40 - 150
1,2-Dichlorobenzene	ND		49.5	53.1		ug/Kg		107	70 - 130
1,2-Dichloroethane	2.1		49.5	61.6		ug/Kg		120	60 - 150
1,2-Dichloropropane	ND		49.5	53.5		ug/Kg		108	65 - 130
1,3,5-Trimethylbenzene	ND		49.5	55.3		ug/Kg		112	65 - 135
1,3-Dichlorobenzene	ND		49.5	49.7		ug/Kg		100	70 - 130
1,3-Dichloropropane	ND		49.5	51.6		ug/Kg		104	65 - 140
1,4-Dichlorobenzene	ND		49.5	51.0		ug/Kg		103	70 - 130
2,2-Dichloropropane	ND		49.5	61.3		ug/Kg		124	65 - 150
2-Chlorotoluene	ND		49.5	50.1		ug/Kg		101	60 - 135
4-Chlorotoluene	ND		49.5	52.9		ug/Kg		107	65 - 135
Benzene	ND		49.5	46.2		ug/Kg		93	65 - 130
Bromobenzene	ND		49.5	52.2		ug/Kg		106	65 - 140
Bromoform	ND		49.5	63.1		ug/Kg		128	50 - 145
Bromomethane	ND		49.5	42.5		ug/Kg		86	60 - 155
Carbon tetrachloride	ND		49.5	57.1		ug/Kg		115	60 - 145
Chlorobenzene	ND		49.5	49.6		ug/Kg		100	70 - 130
Chloroethane	ND		49.5	39.6		ug/Kg		80	60 - 150
Chloroform	ND		49.5	52.9		ug/Kg		107	65 - 135
Chloromethane	ND		49.5	33.5		ug/Kg		68	40 - 145
cis-1,2-Dichloroethene	1.5	J	49.5	52.4		ug/Kg		103	65 - 135
cis-1,3-Dichloropropene	ND		49.5	57.4		ug/Kg		116	70 - 135
Dibromomethane	ND		49.5	56.5		ug/Kg		114	65 - 140
Dichlorodifluoromethane	ND		49.5	38.6		ug/Kg		78	30 - 160
Ethylbenzene	ND		49.5	53.8		ug/Kg		109	70 - 135
Hexachlorobutadiene	ND		49.5	52.2		ug/Kg		105	50 - 145
Isopropylbenzene	ND		49.5	52.5		ug/Kg		106	70 - 145
m,p-Xylene	2.2	J	99.0	107		ug/Kg		106	70 - 130
Methylene Chloride	200		49.5	259	4	ug/Kg		116	55 - 145
Naphthalene	ND		49.5	60.1		ug/Kg		121	40 - 150
n-Butylbenzene	ND		49.5	54.6		ug/Kg		110	55 - 145
N-Propylbenzene	ND		49.5	52.4		ug/Kg		106	65 - 140
o-Xylene	1.8	J	49.5	54.1		ug/Kg		106	65 - 130
sec-Butylbenzene	ND		49.5	53.2		ug/Kg		107	60 - 135
Styrene	ND		49.5	54.6		ug/Kg		110	70 - 140
tert-Butylbenzene	ND		49.5	54.4		ug/Kg		110	60 - 140
Tetrachloroethene	160		49.5	191	F1	ug/Kg		64	65 - 135
Toluene	15		49.5	64.6		ug/Kg		100	70 - 130
trans-1,2-Dichloroethene	ND		49.5	50.7		ug/Kg		102	70 - 135
trans-1,3-Dichloropropene	ND		49.5	60.5		ug/Kg		122	60 - 145
Trichloroethene	600	E	49.5	641	E 4	ug/Kg		89	65 - 140

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-71469-B-1 MS**

**Client Sample ID: Matrix Spike**

**Matrix: Solid**

**Prep Type: Total/NA**

**Analysis Batch: 166692**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits	
	Result	Qualifier	Added	Result	Qualifier					
Trichlorofluoromethane	ND		49.5	69.7		ug/Kg		141	55 - 155	
Vinyl chloride	ND		49.5	37.4		ug/Kg		76	55 - 140	
1,2-Dibromoethane (EDB)	ND		49.5	55.5		ug/Kg		112	65 - 140	
Bromochloromethane	ND		49.5	52.8		ug/Kg		107	65 - 145	
Bromodichloromethane	ND		49.5	58.8		ug/Kg		119	65 - 145	
Dibromochloromethane	ND		49.5	58.3		ug/Kg		118	60 - 145	
p-Isopropyltoluene	ND		49.5	54.6		ug/Kg		110	60 - 140	
<b>MS MS</b>										
Surrogate	%Recovery	Qualifier	Limits							
Toluene-d8 (Surr)	104		79 - 123							
4-Bromofluorobenzene (Surr)	110		79 - 120							
Dibromofluoromethane (Surr)	103		60 - 120							

**Lab Sample ID: 440-71469-B-1 MSD**

**Client Sample ID: Matrix Spike Duplicate**

**Matrix: Solid**

**Prep Type: Total/NA**

**Analysis Batch: 166692**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1,1,2-Tetrachloroethane	ND		50.0	53.3		ug/Kg		107	65 - 145	3	20
1,1,1-Trichloroethane	42		50.0	94.9		ug/Kg		106	65 - 145	2	20
1,1,1,2,2-Tetrachloroethane	ND		50.0	57.6		ug/Kg		115	40 - 160	4	30
1,1,2-Trichloroethane	8.3		50.0	64.6		ug/Kg		113	65 - 140	0	30
1,1-Dichloroethane	3.0		50.0	50.4		ug/Kg		95	65 - 135	2	25
1,1-Dichloroethene	30		50.0	82.7		ug/Kg		105	65 - 135	5	25
1,1-Dichloropropene	ND		50.0	52.2		ug/Kg		104	65 - 135	1	20
1,2,3-Trichlorobenzene	ND		50.0	54.3		ug/Kg		109	45 - 145	0	30
1,2,3-Trichloropropane	ND		50.0	58.5		ug/Kg		117	50 - 150	5	30
1,2,4-Trichlorobenzene	ND		50.0	54.3		ug/Kg		109	50 - 140	3	30
1,2,4-Trimethylbenzene	ND		50.0	55.9		ug/Kg		112	65 - 140	2	25
1,2-Dibromo-3-Chloropropane	ND		50.0	64.5		ug/Kg		129	40 - 150	4	30
1,2-Dichlorobenzene	ND		50.0	52.8		ug/Kg		106	70 - 130	1	25
1,2-Dichloroethane	2.1		50.0	62.6		ug/Kg		121	60 - 150	2	25
1,2-Dichloropropane	ND		50.0	53.4		ug/Kg		107	65 - 130	0	20
1,3,5-Trimethylbenzene	ND		50.0	54.4		ug/Kg		109	65 - 135	2	25
1,3-Dichlorobenzene	ND		50.0	48.5		ug/Kg		97	70 - 130	2	25
1,3-Dichloropropane	ND		50.0	52.7		ug/Kg		105	65 - 140	2	25
1,4-Dichlorobenzene	ND		50.0	49.7		ug/Kg		99	70 - 130	3	25
2,2-Dichloropropane	ND		50.0	61.2		ug/Kg		122	65 - 150	0	25
2-Chlorotoluene	ND		50.0	49.5		ug/Kg		99	60 - 135	1	25
4-Chlorotoluene	ND		50.0	52.0		ug/Kg		104	65 - 135	2	25
Benzene	ND		50.0	45.7		ug/Kg		91	65 - 130	1	20
Bromobenzene	ND		50.0	52.9		ug/Kg		106	65 - 140	1	25
Bromoform	ND		50.0	65.6		ug/Kg		131	50 - 145	4	30
Bromomethane	ND		50.0	42.0		ug/Kg		84	60 - 155	1	25
Carbon tetrachloride	ND		50.0	54.4		ug/Kg		109	60 - 145	5	25
Chlorobenzene	ND		50.0	49.0		ug/Kg		98	70 - 130	1	25
Chloroethane	ND		50.0	36.6		ug/Kg		73	60 - 150	8	25
Chloroform	ND		50.0	52.8		ug/Kg		106	65 - 135	0	20

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-71469-B-1 MSD

Matrix: Solid

Analysis Batch: 166692

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloromethane	ND		50.0	33.1		ug/Kg		66	40 - 145	1	25
cis-1,2-Dichloroethene	1.5	J	50.0	52.7		ug/Kg		103	65 - 135	1	25
cis-1,3-Dichloropropene	ND		50.0	58.0		ug/Kg		116	70 - 135	1	25
Dibromomethane	ND		50.0	58.2		ug/Kg		116	65 - 140	3	25
Dichlorodifluoromethane	ND		50.0	37.3		ug/Kg		75	30 - 160	3	35
Ethylbenzene	ND		50.0	52.1		ug/Kg		104	70 - 135	3	25
Hexachlorobutadiene	ND		50.0	52.4		ug/Kg		105	50 - 145	0	35
Isopropylbenzene	ND		50.0	52.0		ug/Kg		104	70 - 145	1	25
m,p-Xylene	2.2	J	100	103		ug/Kg		101	70 - 130	4	25
Methylene Chloride	200		50.0	253	4	ug/Kg		103	55 - 145	2	25
Naphthalene	ND		50.0	62.8		ug/Kg		126	40 - 150	4	40
n-Butylbenzene	ND		50.0	53.8		ug/Kg		108	55 - 145	2	30
N-Propylbenzene	ND		50.0	51.4		ug/Kg		103	65 - 140	2	25
o-Xylene	1.8	J	50.0	53.4		ug/Kg		103	65 - 130	1	25
sec-Butylbenzene	ND		50.0	53.0		ug/Kg		106	60 - 135	0	25
Styrene	ND		50.0	53.5		ug/Kg		107	70 - 140	2	25
tert-Butylbenzene	ND		50.0	54.3		ug/Kg		109	60 - 140	0	25
Tetrachloroethene	160		50.0	196		ug/Kg		73	65 - 135	2	25
Toluene	15		50.0	64.6		ug/Kg		99	70 - 130	0	20
trans-1,2-Dichloroethene	ND		50.0	49.5		ug/Kg		99	70 - 135	2	25
trans-1,3-Dichloropropene	ND		50.0	61.5		ug/Kg		123	60 - 145	2	25
Trichloroethene	600	E	50.0	633	E 4	ug/Kg		71	65 - 140	1	25
Trichlorofluoromethane	ND		50.0	69.3		ug/Kg		139	55 - 155	1	25
Vinyl chloride	ND		50.0	36.5		ug/Kg		73	55 - 140	2	30
1,2-Dibromoethane (EDB)	ND		50.0	55.3		ug/Kg		111	65 - 140	0	25
Bromochloromethane	ND		50.0	53.1		ug/Kg		106	65 - 145	1	25
Bromodichloromethane	ND		50.0	58.7		ug/Kg		117	65 - 145	0	20
Dibromochloromethane	ND		50.0	58.7		ug/Kg		117	60 - 145	1	25
p-Isopropyltoluene	ND		50.0	54.5		ug/Kg		109	60 - 140	0	25

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	105		79 - 123
4-Bromofluorobenzene (Surr)	112		79 - 120
Dibromofluoromethane (Surr)	110		60 - 120

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-166162/1-A

Matrix: Solid

Analysis Batch: 166642

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 166162

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Hexachlorobenzene	ND		330	70	ug/Kg		03/03/14 12:53	03/04/14 21:27	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	80		35 - 120	03/03/14 12:53	03/04/14 21:27	1
2-Fluorophenol (Surr)	76		25 - 120	03/03/14 12:53	03/04/14 21:27	1

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-166162/1-A**

**Matrix: Solid**

**Analysis Batch: 166642**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 166162**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	90		35 - 125	03/03/14 12:53	03/04/14 21:27	1
Nitrobenzene-d5 (Surr)	68		30 - 120	03/03/14 12:53	03/04/14 21:27	1
Terphenyl-d14 (Surr)	92		40 - 135	03/03/14 12:53	03/04/14 21:27	1
Phenol-d6 (Surr)	76		35 - 120	03/03/14 12:53	03/04/14 21:27	1

**Lab Sample ID: LCS 440-166162/2-A**

**Matrix: Solid**

**Analysis Batch: 166642**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 166162**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobenzene	3330	2980		ug/Kg		89	68 - 110

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	81		35 - 120
2-Fluorophenol (Surr)	80		25 - 120
2,4,6-Tribromophenol (Surr)	93		35 - 125
Nitrobenzene-d5 (Surr)	71		30 - 120
Terphenyl-d14 (Surr)	92		40 - 135
Phenol-d6 (Surr)	82		35 - 120

**Lab Sample ID: 440-71465-A-18-A MS**

**Matrix: Solid**

**Analysis Batch: 166642**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 166162**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobenzene	ND		3320	2950		ug/Kg		89	50 - 120

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	79		35 - 120
2-Fluorophenol (Surr)	76		25 - 120
2,4,6-Tribromophenol (Surr)	91		35 - 125
Nitrobenzene-d5 (Surr)	69		30 - 120
Terphenyl-d14 (Surr)	89		40 - 135
Phenol-d6 (Surr)	81		35 - 120

**Lab Sample ID: 440-71465-A-18-B MSD**

**Matrix: Solid**

**Analysis Batch: 166642**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 166162**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene	ND		3310	2990		ug/Kg		90	50 - 120	1	25

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	84		35 - 120
2-Fluorophenol (Surr)	79		25 - 120
2,4,6-Tribromophenol (Surr)	95		35 - 125
Nitrobenzene-d5 (Surr)	72		30 - 120

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-71465-A-18-B MSD**

**Matrix: Solid**

**Analysis Batch: 166642**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 166162**

Surrogate	MSD		Limits
	%Recovery	Qualifier	
Terphenyl-d14 (Surr)	94		40 - 135
Phenol-d6 (Surr)	85		35 - 120

## Method: 8081A - Organochlorine Pesticides (GC)

**Lab Sample ID: MB 440-165920/1-A**

**Matrix: Solid**

**Analysis Batch: 166473**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 165920**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,4'-DDT	ND		5.0	1.5	ug/Kg		03/01/14 07:28	03/04/14 17:18	1
beta-BHC	ND		5.0	1.5	ug/Kg		03/01/14 07:28	03/04/14 17:18	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	79		35 - 115	03/01/14 07:28	03/04/14 17:18	1
DCB Decachlorobiphenyl (Surr)	96		45 - 120	03/01/14 07:28	03/04/14 17:18	1

**Lab Sample ID: LCS 440-165920/2-A**

**Matrix: Solid**

**Analysis Batch: 166473**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 165920**

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
4,4'-DDT	16.7	13.9		ug/Kg		83	65 - 120
beta-BHC	16.7	12.5		ug/Kg		75	60 - 115

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	91		35 - 115
DCB Decachlorobiphenyl (Surr)	107		45 - 120

**Lab Sample ID: 440-71479-A-1-A MS**

**Matrix: Solid**

**Analysis Batch: 166473**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 165920**

Analyte	Sample		Spike Added	MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
4,4'-DDT	ND		16.6	11.1		ug/Kg		67	35 - 130
beta-BHC	ND		16.6	8.98		ug/Kg		54	40 - 120

Surrogate	MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	71		35 - 115
DCB Decachlorobiphenyl (Surr)	82		45 - 120

**Lab Sample ID: 440-71479-A-1-B MSD**

**Matrix: Solid**

**Analysis Batch: 166473**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 165920**

Analyte	Sample		Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
4,4'-DDT	ND		16.7	12.1		ug/Kg		73	35 - 130	9	30

TestAmerica Irvine



# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 440-71479-A-1-B MSD

Matrix: Solid

Analysis Batch: 166473

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 165920

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
beta-BHC	ND		16.7	9.84		ug/Kg		59	40 - 120	9	30
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
Tetrachloro-m-xylene	75		35 - 115								
DCB Decachlorobiphenyl (Surr)	93		45 - 120								

## Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MRL 440-167746/5

Matrix: Solid

Analysis Batch: 167746

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	4.00	3.76	J	ug/L		94	75 - 125

Lab Sample ID: MB 440-167417/1-A

Matrix: Solid

Analysis Batch: 167746

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.040	0.0095	mg/Kg			03/10/14 16:01	1

Lab Sample ID: LCS 440-167417/2-A

Matrix: Solid

Analysis Batch: 167746

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.501	0.553		mg/Kg		110	85 - 115

Lab Sample ID: 440-71600-2 MS

Matrix: Solid

Analysis Batch: 167746

Client Sample ID: GW-11-EQ-EXCAV-Composite

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	60		0.503	64.2	4	mg/Kg		904	80 - 120

Lab Sample ID: 440-71600-2 MSD

Matrix: Solid

Analysis Batch: 167746

Client Sample ID: GW-11-EQ-EXCAV-Composite

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	60		0.500	63.2	4	mg/Kg		709	80 - 120	2	20

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 7199 - Chromium, Hexavalent (IC)

**Lab Sample ID: MB 440-168699/1-A**  
**Matrix: Solid**  
**Analysis Batch: 169080**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 168699**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.80	0.20	mg/Kg		03/12/14 21:01	03/14/14 09:23	10

**Lab Sample ID: LCS 440-168699/2-A**  
**Matrix: Solid**  
**Analysis Batch: 169080**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 168699**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	16.1	14.3		mg/Kg		89	80 - 120

**Lab Sample ID: 440-71600-2 MS**  
**Matrix: Solid**  
**Analysis Batch: 169080**

**Client Sample ID: GW-11-EQ-EXCAV-Composite**  
**Prep Type: Total/NA**  
**Prep Batch: 168699**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.32	J	15.9	15.0		mg/Kg		93	55 - 110

**Lab Sample ID: 440-71600-2 MSD**  
**Matrix: Solid**  
**Analysis Batch: 169080**

**Client Sample ID: GW-11-EQ-EXCAV-Composite**  
**Prep Type: Total/NA**  
**Prep Batch: 168699**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	0.32	J	15.9	14.6		mg/Kg		90	55 - 110	3	20

**Lab Sample ID: 440-71600-2 MSI**  
**Matrix: Solid**  
**Analysis Batch: 169080**

**Client Sample ID: GW-11-EQ-EXCAV-Composite**  
**Prep Type: Total/NA**  
**Prep Batch: 168699**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.32	J	1530	1290		mg/Kg		84	55 - 110

**Lab Sample ID: MRL 440-169080/4**  
**Matrix: Solid**  
**Analysis Batch: 169080**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	1.00	1.14	J	ug/L		114	

## Method: 8290 - Dioxins and Furans (HRGC/HRMS)

**Lab Sample ID: MB 320-37800/1-A**  
**Matrix: Solid**  
**Analysis Batch: 38001**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 37800**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.13	pg/g		03/06/14 12:44	03/07/14 22:11	1
2,3,7,8-TCDF	0.537	J	1.0	0.10	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,7,8-PeCDD	ND		5.0	0.17	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,7,8-PeCDF	0.371	J	5.0	0.11	pg/g		03/06/14 12:44	03/07/14 22:11	1
2,3,4,7,8-PeCDF	0.320	J q	5.0	0.12	pg/g		03/06/14 12:44	03/07/14 22:11	1

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

**Lab Sample ID: MB 320-37800/1-A**

**Matrix: Solid**

**Analysis Batch: 38001**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 37800**

Analyte	MB	MB	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3,4,7,8-HxCDD	ND		5.0	0.098	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.076	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.073	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,4,7,8-HxCDF	3.06	J	5.0	0.12	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,6,7,8-HxCDF	1.04	J	5.0	0.091	pg/g		03/06/14 12:44	03/07/14 22:11	1
2,3,4,6,7,8-HxCDF	0.380	J	5.0	0.10	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.11	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,4,6,7,8-HpCDD	0.336	J	5.0	0.11	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,4,6,7,8-HpCDF	5.52		5.0	0.14	pg/g		03/06/14 12:44	03/07/14 22:11	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.16	pg/g		03/06/14 12:44	03/07/14 22:11	1
OCDD	1.89	J q	10	0.15	pg/g		03/06/14 12:44	03/07/14 22:11	1
OCDF	3.21	J	10	0.19	pg/g		03/06/14 12:44	03/07/14 22:11	1
Total TCDD	ND		1.0	0.13	pg/g		03/06/14 12:44	03/07/14 22:11	1
Total TCDF	0.537	J	1.0	0.10	pg/g		03/06/14 12:44	03/07/14 22:11	1
Total PeCDD	ND		5.0	0.17	pg/g		03/06/14 12:44	03/07/14 22:11	1
Total PeCDF	1.79	J q	5.0	0.12	pg/g		03/06/14 12:44	03/07/14 22:11	1
Total HxCDD	ND		5.0	0.098	pg/g		03/06/14 12:44	03/07/14 22:11	1
Total HxCDF	5.59	q	5.0	0.11	pg/g		03/06/14 12:44	03/07/14 22:11	1
Total HpCDD	0.669	J	5.0	0.11	pg/g		03/06/14 12:44	03/07/14 22:11	1
Total HpCDF	6.25		5.0	0.15	pg/g		03/06/14 12:44	03/07/14 22:11	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-2,3,7,8-TCDD	64		40 - 135	03/06/14 12:44	03/07/14 22:11	1
13C-2,3,7,8-TCDF	64		40 - 135	03/06/14 12:44	03/07/14 22:11	1
13C-1,2,3,7,8-PeCDD	57		40 - 135	03/06/14 12:44	03/07/14 22:11	1
13C-1,2,3,7,8-PeCDF	63		40 - 135	03/06/14 12:44	03/07/14 22:11	1
13C-1,2,3,6,7,8-HxCDD	84		40 - 135	03/06/14 12:44	03/07/14 22:11	1
13C-1,2,3,4,7,8-HxCDF	71		40 - 135	03/06/14 12:44	03/07/14 22:11	1
13C-1,2,3,4,6,7,8-HpCDD	71		40 - 135	03/06/14 12:44	03/07/14 22:11	1
13C-1,2,3,4,6,7,8-HpCDF	72		40 - 135	03/06/14 12:44	03/07/14 22:11	1
13C-OCDD	64		40 - 135	03/06/14 12:44	03/07/14 22:11	1

**Lab Sample ID: LCS 320-37800/2-A**

**Matrix: Solid**

**Analysis Batch: 38676**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 37800**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	19.7		pg/g		98	60 - 138
2,3,7,8-TCDF	20.0	22.2		pg/g		111	56 - 158
1,2,3,7,8-PeCDD	100	103		pg/g		103	70 - 122
1,2,3,7,8-PeCDF	100	105		pg/g		105	69 - 134
2,3,4,7,8-PeCDF	100	105		pg/g		105	70 - 131
1,2,3,4,7,8-HxCDD	100	94.2		pg/g		94	60 - 138
1,2,3,6,7,8-HxCDD	100	103		pg/g		103	68 - 136
1,2,3,7,8,9-HxCDD	100	94.6		pg/g		95	68 - 138
1,2,3,4,7,8-HxCDF	100	105		pg/g		105	74 - 128
1,2,3,6,7,8-HxCDF	100	109		pg/g		109	67 - 140
2,3,4,6,7,8-HxCDF	100	107		pg/g		107	71 - 137

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

**Lab Sample ID: LCS 320-37800/2-A**  
**Matrix: Solid**  
**Analysis Batch: 38676**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 37800**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,7,8,9-HxCDF	100	104		pg/g		104	72 - 134
1,2,3,4,6,7,8-HpCDD	100	104		pg/g		104	71 - 128
1,2,3,4,6,7,8-HpCDF	100	110		pg/g		110	71 - 134
1,2,3,4,7,8,9-HpCDF	100	113		pg/g		113	68 - 129
OCDD	200	219		pg/g		110	70 - 128
OCDF	200	205		pg/g		103	63 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	60		40 - 135
13C-2,3,7,8-TCDF	57		40 - 135
13C-1,2,3,7,8-PeCDD	67		40 - 135
13C-1,2,3,7,8-PeCDF	62		40 - 135
13C-1,2,3,6,7,8-HxCDD	67		40 - 135
13C-1,2,3,4,7,8-HxCDF	58		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	59		40 - 135
13C-OCDD	70		40 - 135

## Method: 6010B - Metals (ICP) - Solid Matrix

**Lab Sample ID: MB 440-166528/1-A ^5**  
**Matrix: Solid**  
**Analysis Batch: 166812**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 166528**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0	1.5	mg/Kg		03/04/14 14:56	03/05/14 12:06	5
Boron	ND		4.9	2.5	mg/Kg		03/04/14 14:56	03/05/14 12:06	5
Chromium	ND		0.99	0.49	mg/Kg		03/04/14 14:56	03/05/14 12:06	5
Iron	6.82	J	9.9	4.9	mg/Kg		03/04/14 14:56	03/05/14 12:06	5
Magnesium	10.3		9.9	4.9	mg/Kg		03/04/14 14:56	03/05/14 12:06	5
Manganese	ND		2.0	0.99	mg/Kg		03/04/14 14:56	03/05/14 12:06	5

**Lab Sample ID: LCS 440-166528/2-A ^5**  
**Matrix: Solid**  
**Analysis Batch: 166812**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 166528**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	49.5	48.3		mg/Kg		98	80 - 120
Boron	49.5	46.8		mg/Kg		94	80 - 120
Chromium	49.5	51.7		mg/Kg		104	80 - 120
Iron	49.5	54.5		mg/Kg		110	80 - 120
Magnesium	248	257	B	mg/Kg		104	80 - 120
Manganese	49.5	49.3		mg/Kg		100	80 - 120

TestAmerica Irvine

# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 6010B - Metals (ICP) - Solid Matrix (Continued)

**Lab Sample ID: 440-71070-A-1-I MS ^5**

**Matrix: Solid**

**Analysis Batch: 166812**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 166528**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD
Arsenic	2.3	J	49.8	51.2		mg/Kg		98	75 - 125	
Boron	6.3		49.8	71.5	F1	mg/Kg		131	75 - 125	
Chromium	13		49.8	61.4		mg/Kg		98	75 - 125	
Iron	13000	B	49.8	17100	4	mg/Kg		8316	75 - 125	
Magnesium	5200	B	249	12400	4 B	mg/Kg		2883	75 - 125	
Manganese	270		49.8	784	4	mg/Kg		1040	75 - 125	

**Lab Sample ID: 440-71070-A-1-J MSD ^5**

**Matrix: Solid**

**Analysis Batch: 166812**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 166528**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
Arsenic	2.3	J	49.8	49.3		mg/Kg		94	75 - 125	4	20	
Boron	6.3		49.8	76.7	F1	mg/Kg		142	75 - 125	7	20	
Chromium	13		49.8	58.4		mg/Kg		92	75 - 125	5	20	
Iron	13000	B	49.8	15800	4	mg/Kg		5858	75 - 125	7	20	
Magnesium	5200	B	249	14500	4 B	mg/Kg		3731	75 - 125	16	20	
Manganese	270		49.8	822	4	mg/Kg		1115	75 - 125	5	20	

## Method: 9045C - pH

**Lab Sample ID: 440-71469-B-1-C DU**

**Matrix: Solid**

**Analysis Batch: 166386**

**Client Sample ID: Duplicate**

**Prep Type: Soluble**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	
	Result	Qualifier	Result	Qualifier				Limit	Limit
pH	7.51		7.490		SU		0.3	2	

## Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

**Lab Sample ID: 440-71469-B-1-C DU**

**Matrix: Solid**

**Analysis Batch: 166387**

**Client Sample ID: Duplicate**

**Prep Type: Soluble**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	
	Result	Qualifier	Result	Qualifier				Limit	Limit
Oxidation Reduction Potential	440		434		millivolts		0.5	5	

# QC Association Summary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## GC/MS VOA

### Analysis Batch: 166692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71469-B-1 MS	Matrix Spike	Total/NA	Solid	8260B	
440-71469-B-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	8260B	
LCS 440-166692/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 440-166692/4	Method Blank	Total/NA	Solid	8260B	

## GC/MS Semi VOA

### Prep Batch: 166162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71465-A-18-A MS	Matrix Spike	Total/NA	Solid	3546	
440-71465-A-18-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	3546	
LCS 440-166162/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 440-166162/1-A	Method Blank	Total/NA	Solid	3546	

### Analysis Batch: 166642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71465-A-18-A MS	Matrix Spike	Total/NA	Solid	8270C	166162
440-71465-A-18-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8270C	166162
LCS 440-166162/2-A	Lab Control Sample	Total/NA	Solid	8270C	166162
MB 440-166162/1-A	Method Blank	Total/NA	Solid	8270C	166162

### Analysis Batch: 167137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	8270C	166162

## GC Semi VOA

### Prep Batch: 165920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71479-A-1-A MS	Matrix Spike	Total/NA	Solid	3546	
440-71479-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	
440-71600-2 - DL	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	3546	
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	3546	
LCS 440-165920/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 440-165920/1-A	Method Blank	Total/NA	Solid	3546	

### Analysis Batch: 166473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71479-A-1-A MS	Matrix Spike	Total/NA	Solid	8081A	165920
440-71479-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8081A	165920
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	8081A	165920
440-71600-2 - DL	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	8081A	165920
LCS 440-165920/2-A	Lab Control Sample	Total/NA	Solid	8081A	165920
MB 440-165920/1-A	Method Blank	Total/NA	Solid	8081A	165920

# QC Association Summary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## HPLC/IC

### Leach Batch: 167417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71600-2	GW-11-EQ-EXCAV-Composite	Soluble	Solid	DI Leach	
440-71600-2 MS	GW-11-EQ-EXCAV-Composite	Soluble	Solid	DI Leach	
440-71600-2 MSD	GW-11-EQ-EXCAV-Composite	Soluble	Solid	DI Leach	
LCS 440-167417/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
MB 440-167417/1-A	Method Blank	Soluble	Solid	DI Leach	

### Analysis Batch: 167746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71600-2	GW-11-EQ-EXCAV-Composite	Soluble	Solid	314.0	167417
440-71600-2 MS	GW-11-EQ-EXCAV-Composite	Soluble	Solid	314.0	167417
440-71600-2 MSD	GW-11-EQ-EXCAV-Composite	Soluble	Solid	314.0	167417
LCS 440-167417/2-A	Lab Control Sample	Soluble	Solid	314.0	167417
MB 440-167417/1-A	Method Blank	Soluble	Solid	314.0	167417
MRL 440-167746/5	Lab Control Sample	Total/NA	Solid	314.0	

### Prep Batch: 168699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	3060A	
440-71600-2 MS	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	3060A	
440-71600-2 MSD	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	3060A	
440-71600-2 MSI	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	3060A	
LCS 440-168699/2-A	Lab Control Sample	Total/NA	Solid	3060A	
MB 440-168699/1-A	Method Blank	Total/NA	Solid	3060A	

### Analysis Batch: 169080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	7199	168699
440-71600-2 MS	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	7199	168699
440-71600-2 MSD	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	7199	168699
440-71600-2 MSI	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	7199	168699
LCS 440-168699/2-A	Lab Control Sample	Total/NA	Solid	7199	168699
MB 440-168699/1-A	Method Blank	Total/NA	Solid	7199	168699
MRL 440-169080/4	Lab Control Sample	Total/NA	Solid	7199	

## Specialty Organics

### Prep Batch: 37800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	8290	
LCS 320-37800/2-A	Lab Control Sample	Total/NA	Solid	8290	
MB 320-37800/1-A	Method Blank	Total/NA	Solid	8290	

### Analysis Batch: 38001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	8290	37800
MB 320-37800/1-A	Method Blank	Total/NA	Solid	8290	37800

### Analysis Batch: 38676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-37800/2-A	Lab Control Sample	Total/NA	Solid	8290	37800

TestAmerica Irvine

# QC Association Summary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Metals

### Prep Batch: 166528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71070-A-1-I MS ^5	Matrix Spike	Total/NA	Solid	3050B	
440-71070-A-1-J MSD ^5	Matrix Spike Duplicate	Total/NA	Solid	3050B	
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	3050B	
LCS 440-166528/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
MB 440-166528/1-A ^5	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 166812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71070-A-1-I MS ^5	Matrix Spike	Total/NA	Solid	6010B	166528
440-71070-A-1-J MSD ^5	Matrix Spike Duplicate	Total/NA	Solid	6010B	166528
440-71600-2	GW-11-EQ-EXCAV-Composite	Total/NA	Solid	6010B	166528
LCS 440-166528/2-A ^5	Lab Control Sample	Total/NA	Solid	6010B	166528
MB 440-166528/1-A ^5	Method Blank	Total/NA	Solid	6010B	166528

## General Chemistry

### Leach Batch: 166355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71469-B-1-C DU	Duplicate	Soluble	Solid	DI Leach	
440-71600-2	GW-11-EQ-EXCAV-Composite	Soluble	Solid	DI Leach	

### Analysis Batch: 166386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71469-B-1-C DU	Duplicate	Soluble	Solid	9045C	166355
440-71600-2	GW-11-EQ-EXCAV-Composite	Soluble	Solid	9045C	166355

### Analysis Batch: 166387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-71469-B-1-C DU	Duplicate	Soluble	Solid	SM 2580B	166355
440-71600-2	GW-11-EQ-EXCAV-Composite	Soluble	Solid	SM 2580B	166355



# Definitions/Glossary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery exceeds the control limits
E	Result exceeded calibration range.

### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
cn	Refer to Case Narrative for further detail
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)

TestAmerica Irvine

## Definitions/Glossary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

---

### Glossary (Continued)

---

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

# Certification Summary

Client: ENVIRON International Corp.  
Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-14
Arizona	State Program	9	AZ0671	10-13-14
California	LA Cty Sanitation Districts	9	10256	01-31-15
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-14 *
Hawaii	State Program	9	N/A	01-29-15 *
Nevada	State Program	9	CA015312007A	07-31-14
New Mexico	State Program	6	N/A	01-31-14 *
Northern Mariana Islands	State Program	9	MP0002	01-31-14 *
Oregon	NELAP	10	4005	01-29-15
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-15

## Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	04-30-14
Alaska (UST)	State Program	10	UST-055	12-18-13 *
Arizona	State Program	9	AZ0708	08-11-14
Arkansas DEQ	State Program	6	88-0691	06-17-14
California	State Program	9	2897	01-31-15
Colorado	State Program	8	N/A	08-31-14
Connecticut	State Program	1	PH-0691	06-30-15
Florida	NELAP	4	E87570	06-30-14
Guam	State Program	9	N/A	08-31-14
Hawaii	State Program	9	N/A	01-29-15
Illinois	NELAP	5	200060	03-17-15
Kansas	NELAP	7	E-10375	10-31-14
Louisiana	NELAP	6	30612	06-30-14
Michigan	State Program	5	9947	01-31-15
Nebraska	State Program	7	NE-OS-22-13	01-29-15
Nevada	State Program	9	CA44	07-31-14
New Jersey	NELAP	2	CA005	06-30-14
New York	NELAP	2	11666	03-31-14 *
Oregon	NELAP	10	CA200005	01-29-15
Pennsylvania	NELAP	3	9947	03-31-15
South Carolina	State Program	4	87014	06-30-14
Texas	NELAP	6	T104704399-08-TX	05-31-14
US Fish & Wildlife	Federal		LE148388-0	12-31-14
USDA	Federal		P330-11-00436	12-30-14
USEPA UCMR	Federal	1	CA00044	11-06-14
Utah	NELAP	8	QUAN1	02-28-15
Washington	State Program	10	C581	05-05-14
West Virginia DHHR	State Program	3	9930C	12-31-14
Wyoming	State Program	8	8TMS-Q	02-28-14 *

\* Expired certification is currently pending renewal and is considered valid.

TestAmerica Irvine



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Report for:

**Ms. Sushmitha Reddy**  
**TestAmerica Irvine**  
 17461 Derian Ave.  
 Suite 100  
 Irvine, CA 92614

Regarding:      Project: 440-71600-1  
                       EML ID: 1180410

Approved by:

Dates of Analysis:  
 Asbestos-EPA Method 600/R-93/116: 03-12-2014



Approved Signatory  
 Miguel Ines

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01267))

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.



**EMLab P&K**

17461 Derian Ave, Suite 100, Irvine, CA 92614  
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: TestAmerica Irvine  
C/O: Ms. Sushmitha Reddy  
Re: 440-71600-1

Date of Sampling: 02-27-2014  
Date of Receipt: 03-10-2014  
Date of Report: 03-12-2014

**ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116**

**Total Samples Submitted:** 1  
**Total Samples Analysed:** 1  
**Total Samples with Layer Asbestos Content > 1%:** 0

**Location: GW-11-EQCAV-Composite (440-71600-2)**

Lab ID-Version‡: 5347751-1

Sample Layers	Asbestos Content
Gray Soil	ND
<b>Sample Composite Homogeneity:</b>	Moderate

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

# ENVIRON

6001 Shellmound Street, Suite 700  
Emeryville, California 94608  
(510) 655-7400  
(510) 655-9517 (fax)

# CHAIN-OF-CUSTODY

03281

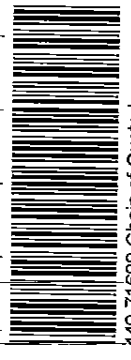
PAGE 1 of 2

PROJECT NAME / FACILITY ID: GW-11 EQ excavation  
PROJECT NUMBER: 21-348005-507 DATE: 02/27/2014  
PROJECT LOCATION: Henderson NV

FIELD PERSON: Nida Shinn  
PROJECT MANAGER: Todd Lusk  
LABORATORY: Test America

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y  N  IF YES, GLOBAL ID #: 116 WO#:

SAMPLER:	SIGNATURE	YEAR	SAMPLE DATE	SAMPLE TIME	SAMPLE DEPTH	MATRIX (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED	EPA Method 800/R93			COMMENTS		
											Asbestos	Metals	6010			
GW-11-EQ-EXCAV	<i>[Signature]</i>	2014	02/27/14	100'		S	4	U	NO	Asbestos Metals EPA Method 600/R93 EPA 6010 - arsenic, boron, cadmium, chromium, copper, lead, mercury, manganese, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc, and barium EPA 4199 Biocins/Furnas EPA 8380 VOCs EPA 8260 B Hexachlorobenzene EPA 8370 D EPA 8700 EPA 3140	X	X	X	Lab to composite the 4 jars prior to analysis		
																See attached page with analysis requirements
TOTAL											X	X	X			



RELINQUISHED BY:	<i>[Signature]</i>	TIME/DATE:	02/27/2014	RECEIVED BY:	<i>[Signature]</i>	TIME/DATE:	2/27/14 1345
RELINQUISHED BY:	<i>[Signature]</i>	TIME/DATE:	2/25/14 12:00 PM	RECEIVED BY:	<i>[Signature]</i>	TIME/DATE:	10:15 2/28/14
RELINQUISHED BY:		TIME/DATE:		RECEIVED BY:		TIME/DATE:	

440-71600 Chain of Custody

TURNAROUND TIME (CIRCLE ONE)  
 72 HOURS  
 24 HOURS  
 48 HOURS  
 5 DAYS  
 INTERVAL

IF SEALED, SEAL INTEGRITY  
 INTACT: Y N  
 INTACT: Y N  
 SAMPLE INTEGRITY  
 INTACT: Y N Temp  
 5.1/5.9

Feb. 57973 5802 8560 FR-63

# ENVIRON

6001 Shellmound Street, Suite 700  
 Emeryville, California 94608  
 (510) 655-7400  
 (510) 655-9517 (fax)

# CHAIN-OF-CUSTODY

03282

PAGE 2 of 2

PROJECT NAME / FACILITY ID: GW-11 EQ Excavation FIELD PERSON: Nisa Shim  
 PROJECT NUMBER: 21-34800 S-507 DATE: 02-27-2014 PROJECT MANAGER: Todd Lusk  
 PROJECT LOCATION: Henderson NV LABORATORY: Test America

IS THIS A UST PROJECT OR IS EDF REQUIRED?  Y  N IF YES, GLOBAL ID #: \_\_\_\_\_ WO#: \_\_\_\_\_

SAMPLER:	SIGNATURE:	YEAR	SAMPLE DATE	SAMPLE TIME	SAMPLE DEPTH	MATRIX (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED	COMMENTS	72 HOURS 5 DAYS NORMAL	
													IF SEALED, SEAL INTEGRITY
GW-11-EQ-Excav		2014	02/27/14	100		S	4	U	NO	X	Lab to Composite the 4 jags prior to analysis		
											See attached page with analysis requirements		
TOTAL													
RELINQUISHED BY:			TIME/DATE:	02/27/2014	RECEIVED BY:			TIME/DATE:	02/27/14	SAMEDAY			72 HOURS
RELINQUISHED BY:			TIME/DATE:	2/27/14	RECEIVED BY:			TIME/DATE:	2/27/14	TURNAROUND TIME (CIRCLE ONE)			5 DAYS
RELINQUISHED BY:			TIME/DATE:	2/27/14	RECEIVED BY:			TIME/DATE:	2/28/14	SAMPLE INTEGRITY			NORMAL

Fed. 5713 58028560 JR 63



Analysis requirements for ENVIRON COCs:

- 03281
- 03282
  
- Asbestos by EPA Method 600/R-93-116
- Metals by EPA Method 6010
  - Arsenic
  - Boron
  - Chromium
  - Magnesium

---

  - Manganese
  - Iron
  - Iron oxide
- Hexavalent chromium by EPA Method 7199
- Dioxins/Furans by EPA Method 8290
- Volatile Organic Compounds (VOCs) by EPA Method 8260B

---

- Hexachlorobenzene (HCB) by EPA Method 8270D

---

- Organochlorine pesticides (OCPs) by EPA Method 8081A
  - Dichlorodiphenyltrichloroethane (DDT)
  - Beta-Benzene hexachloride (Beta-BHC)
- Perchlorate by EPA Method 314.0
- pH by EPA Method 9045D



## Login Sample Receipt Checklist

Client: ENVIRON International Corp.

Job Number: 440-71600-1

**Login Number: 71600**

**List Number: 1**

**Creator: King, Ronald**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: ENVIRON International Corp.

Job Number: 440-71600-1

**Login Number: 71600**

**List Number: 1**

**Creator: Nelson, Kym D**

**List Source: TestAmerica Sacramento**

**List Creation: 03/05/14 02:08 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Isotope Dilution Summary

Client: ENVIRON International Corp.  
 Project/Site: GW-11 EQ Excavation

TestAmerica Job ID: 440-71600-1

## Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
440-71600-2	GW-11-EQ-EXCAV-Composite	68	75	75	83	66	103	80	67 q
LCS 320-37800/2-A	Lab Control Sample	60	57	67	62	67	58	68	59
MB 320-37800/1-A	Method Blank	64	64	57	63	84	71	71	72

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
440-71600-2	GW-11-EQ-EXCAV-Composite	85
LCS 320-37800/2-A	Lab Control Sample	70
MB 320-37800/1-A	Method Blank	64

#### Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF1 = 13C-1,2,3,7,8-PeCDF
- HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
- HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-77660-1

Client Project/Site: NERT GW 11 Stockpile

For:

ENVIRON International Corp.

2200 Powell Street

Suite 700

Emeryville, California 94608

Attn: Mr. John Pekala



Authorized for release by:

5/16/2014 9:34:24 PM

Sushmitha Reddy, Senior Project Manager

(949)261-1022

[sushmitha.reddy@testamericainc.com](mailto:sushmitha.reddy@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	6
Lab Chronicle . . . . .	7
QC Sample Results . . . . .	8
QC Association Summary . . . . .	9
Definitions/Glossary . . . . .	10
Certification Summary . . . . .	11
Chain of Custody . . . . .	12
Receipt Checklists . . . . .	13

# Sample Summary

Client: ENVIRON International Corp.  
Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-77660-5	GW11-Composite	Solid	05/06/14 09:30	05/07/14 10:50

---

1

2

3

4

5

6

7

8

9

10

11

12

13

# Case Narrative

Client: ENVIRON International Corp.  
Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

---

**Job ID: 440-77660-1**

---

**Laboratory: TestAmerica Irvine**

---

**Narrative**

**Job Narrative**  
**440-77660-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 5/7/2014 10:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

**GC/MS Semi VOA**

Method(s) 8270C: The 2-fluorobiphenyl surrogate recovery is below the expected range in the LCS. No impact on the analyte HCB. Thus, data is reported.

Method(s) 8270C: The surrogates and the matrix spike (MS) recovery for hexachlorobenzene is below the expected range. Data is validated on acceptable LCS and acceptable surrogate recoveries in the sample itself.

No other analytical or quality issues were noted.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Client Sample Results

Client: ENVIRON International Corp.  
 Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

**Client Sample ID: GW11-Composite**

**Lab Sample ID: 440-77660-5**

**Date Collected: 05/06/14 09:30**

**Matrix: Solid**

**Date Received: 05/07/14 10:50**

**Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.050	0.015	mg/L		05/10/14 14:24	05/12/14 22:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	58		50 - 120				05/10/14 14:24	05/12/14 22:51	1
2-Fluorophenol (Surr)	61		30 - 120				05/10/14 14:24	05/12/14 22:51	1
Nitrobenzene-d5 (Surr)	61		45 - 120				05/10/14 14:24	05/12/14 22:51	1
Terphenyl-d14 (Surr)	79		10 - 150				05/10/14 14:24	05/12/14 22:51	1
2,4,6-Tribromophenol (Surr)	65		40 - 120				05/10/14 14:24	05/12/14 22:51	1
Phenol-d6 (Surr)	63		35 - 120				05/10/14 14:24	05/12/14 22:51	1



# Method Summary

Client: ENVIRON International Corp.  
Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

---

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV

---

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



# Lab Chronicle

Client: ENVIRON International Corp.  
Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

**Client Sample ID: GW11-Composite**

**Lab Sample ID: 440-77660-5**

**Date Collected: 05/06/14 09:30**

**Matrix: Solid**

**Date Received: 05/07/14 10:50**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.07 g	2000 mL	181108	05/08/14 23:14	SN	TAL IRV
TCLP	Prep	3520C			200 mL	2 mL	181436	05/10/14 14:24	HS	TAL IRV
TCLP	Analysis	8270C		1	200 mL	2 mL	181731	05/12/14 22:51	AI	TAL IRV

**Laboratory References:**

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



# QC Sample Results

Client: ENVIRON International Corp.  
Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-181108/1-B**

**Matrix: Solid**

**Analysis Batch: 181731**

**Client Sample ID: Method Blank**

**Prep Type: TCLP**

**Prep Batch: 181436**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.050	0.015	mg/L		05/10/14 14:24	05/12/14 19:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	61		50 - 120	05/10/14 14:24	05/12/14 19:24	1
2-Fluorophenol (Surr)	64		30 - 120	05/10/14 14:24	05/12/14 19:24	1
Nitrobenzene-d5 (Surr)	66		45 - 120	05/10/14 14:24	05/12/14 19:24	1
Terphenyl-d14 (Surr)	76		10 - 150	05/10/14 14:24	05/12/14 19:24	1
2,4,6-Tribromophenol (Surr)	68		40 - 120	05/10/14 14:24	05/12/14 19:24	1
Phenol-d6 (Surr)	63		35 - 120	05/10/14 14:24	05/12/14 19:24	1

**Lab Sample ID: LCS 440-181108/2-B**

**Matrix: Solid**

**Analysis Batch: 181731**

**Client Sample ID: Lab Control Sample**

**Prep Type: TCLP**

**Prep Batch: 181436**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobenzene	0.500	0.314		mg/L		63	48 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	49	X	50 - 120
2-Fluorophenol (Surr)	51		30 - 120
Nitrobenzene-d5 (Surr)	50		45 - 120
Terphenyl-d14 (Surr)	71		10 - 150
2,4,6-Tribromophenol (Surr)	60		40 - 120
Phenol-d6 (Surr)	52		35 - 120

**Lab Sample ID: 440-77660-5 MS**

**Matrix: Solid**

**Analysis Batch: 181731**

**Client Sample ID: GW11-Composite**

**Prep Type: TCLP**

**Prep Batch: 181436**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobenzene	ND		0.500	0.204	F1	mg/L		41	60 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl	14	X	50 - 120
2-Fluorophenol (Surr)	12	X	30 - 120
Nitrobenzene-d5 (Surr)	10	X	45 - 120
Terphenyl-d14 (Surr)	72		10 - 150
2,4,6-Tribromophenol (Surr)	37	X	40 - 120
Phenol-d6 (Surr)	13	X	35 - 120

# QC Association Summary

Client: ENVIRON International Corp.  
Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

## GC/MS Semi VOA

### Leach Batch: 181108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-77660-5	GW11-Composite	TCLP	Solid	1311	
440-77660-5 MS	GW11-Composite	TCLP	Solid	1311	
LCS 440-181108/2-B	Lab Control Sample	TCLP	Solid	1311	
MB 440-181108/1-B	Method Blank	TCLP	Solid	1311	

### Prep Batch: 181436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-77660-5	GW11-Composite	TCLP	Solid	3520C	181108
440-77660-5 MS	GW11-Composite	TCLP	Solid	3520C	181108
LCS 440-181108/2-B	Lab Control Sample	TCLP	Solid	3520C	181108
MB 440-181108/1-B	Method Blank	TCLP	Solid	3520C	181108

### Analysis Batch: 181731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-77660-5	GW11-Composite	TCLP	Solid	8270C	181436
440-77660-5 MS	GW11-Composite	TCLP	Solid	8270C	181436
LCS 440-181108/2-B	Lab Control Sample	TCLP	Solid	8270C	181436
MB 440-181108/1-B	Method Blank	TCLP	Solid	8270C	181436

# Definitions/Glossary

Client: ENVIRON International Corp.  
Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery exceeds the control limits

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Certification Summary

Client: ENVIRON International Corp.  
Project/Site: NERT GW 11 Stockpile

TestAmerica Job ID: 440-77660-1

## Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-14
Arizona	State Program	9	AZ0671	10-13-14
California	LA Cty Sanitation Districts	9	10256	01-31-15
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-15
Hawaii	State Program	9	N/A	01-29-15 *
Nevada	State Program	9	CA015312007A	07-31-14
New Mexico	State Program	6	N/A	01-29-15
Northern Mariana Islands	State Program	9	MP0002	01-31-14 *
Oregon	NELAP	10	4005	01-29-15
USDA	Federal		P330-09-00080	06-06-15
USEPA UCMR	Federal	1	CA01531	01-31-15

\* Expired certification is currently pending renewal and is considered valid.

TestAmerica Irvine

# ENVIRON

8001 Shellround Street, Suite 700  
 Emeryville, California 94608  
 (510) 655-7400  
 (510) 655-9517 (fax)


# CHAIN-OF-CUSTODY

01891

PAGE 1 of 1

PROJECT NAME / FACILITY ID: NERT Gw11 Stockpile FIELD PERSON: Dan Clark  
 PROJECT NUMBER: 21-34800 DATE: 5/6/14 PROJECT MANAGER: John Perkala  
 PROJECT LOCATION: Henderson, NV LABORATORY: Test America

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y  N  IF YES, GLOBAL ID #: \_\_\_\_\_ WO#: \_\_\_\_\_

SAMPLER: SIGNATURE: <u>D. Clark</u>	YEAR 2014	SAMPLE DATE	SAMPLE TIME	SAMPLE DEPTH	MATRIX (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED TCP HCB	COMMENTS
		5/6/14	0830	N/A	S	1	U	N <sub>6</sub>		Lab to composite
										all four samples
										into one sample;
										"GW11-Comp"
 440-77660 Chain of Custody										
TOTAL										

RELINQUISHED BY: D. Clark TIME/DATE: 1000 5/6/14  
 RELINQUISHED BY: Van Bank TIME/DATE: 10:50 5/7/14  
 RELINQUISHED BY: \_\_\_\_\_ TIME/DATE: \_\_\_\_\_

RECEIVED BY: Fedex TIME/DATE: 0000 5/6/14  
 RECEIVED BY: TAT TIME/DATE: 10:50 5/7/14  
 RECEIVED BY: \_\_\_\_\_ TIME/DATE: \_\_\_\_\_

TURNAROUND TIME (CIRCLE ONE) SAME DAY 24 HOURS 48 HOURS  
 SAMPLE INTEGRITY IR-59 IF SEALED, SEAL INTEGRITY  
 INTACT: Y N Temp: 5.2/49 INTACT: Y N

72 HOURS  
 5 DAYS  
 NORMAL

Fed: 8047 8924 0489

## Login Sample Receipt Checklist

Client: ENVIRON International Corp.

Job Number: 440-77660-1

**Login Number: 77660**

**List Number: 1**

**Creator: Freitag, Kevin R**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	







**Attachment C**  
**Special Waste Profile**

Requested Disposal Facility: 3825 Apex Regional LF NV

Waste Profile #
Sales Rep #:

Seveable fill-in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Generator Name: Nevada Environmental response Trust (NERT)			
Generator Site Address: 510 4th Street			
City: Henderson	County: Clark	State: New York	Zip: 89015
State ID/Reg No: n/a	State Approval/Waste Code: n/a	(if applicable)	NAICS #: n/a
Generator Mailing Address (if different): <input checked="" type="checkbox"/> 35 East Wacker Drive			
City: Chicago	County: Cook	State: Illinois	Zip: 60606
Generator Contact Name: Andrew Steinberg		Email: andrew.steinberg@lepetomaneing	
Phone Number: (312) 498-2800	Ext:	Fax Number:	<i>inc.com</i>

**II. Billing Information**

Bill To: ENVIRON International Corp	Contact Name: Dan Clark
Billing Address: 2200 Powell St. 7th Floor	Email: dclark@environcorp.com
City: Emeryville	State: CA
Zip: 94608	Phone: (510) 420-2563

**III. Waste Stream Information**

Name of Waste: Contaminated Soil from GW-11 Berm	
Process Generating Waste: Soil was generated during on-site excavation activities for the installation of a concrete footer adjacent to the GW-11 pond.	
Type of Waste:	<input type="checkbox"/> INDUSTRIAL PROCESS WASTE <input checked="" type="checkbox"/> POLLUTION CONTROL WASTE
Physical State:	<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID
Method of Shipment:	<input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume:	10 Cubic Yards
Frequency:	<input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING
Disposal Consideration:	<input checked="" type="checkbox"/> LANDFILL <input type="checkbox"/> SOLIDIFICATION <input type="checkbox"/> BIOREMEDIATION

**IV. Representative Sample Certification**
 NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	<input checked="" type="checkbox"/> YES or <input type="checkbox"/> NO
Type of Sample:	<input checked="" type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE
Sample Date:	02/27/2014 / <i>5/6/14</i> <i>DC 5/19/14</i>
Sample ID Numbers:	GW-11-EQ-Excav <i>GW 11-Composite DC 5/19/14</i> <i>(TCLP HCB)</i>



Waste Profile #

**V. Physical Characteristics of Waste**

Characteristic Components		% by Weight (range)			
1. Soil		100			
2.					
3.					
4.					
5.					
Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Brown	None	<input type="checkbox"/> YES or <input checked="" type="checkbox"/> NO	100	8	N/A °F

**Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile**

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste a reactive or heat generating waste?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does the waste contain sulfur or sulfur by-products?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste from a TSD facility, TSD like facility or consolidator?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No

**VI. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

<p>Dan Clark of ENVIRON acting as Authorized Agent for NERT</p> <hr/> <p style="text-align: center;">Authorized Representative Name And Title (Type or Print)</p>	<p>ENVIRON International Corp.</p> <hr/> <p style="text-align: center;">Company Name</p>
<p><i>Daniel Clark of ENVIRON acting as authorized agent for Nevada Environmental Response Trust (NERT)</i></p> <hr/> <p style="text-align: center;">Authorized Representative Signature</p>	<p>4-25-2014</p> <hr/> <p style="text-align: center;">Date</p>

*Changes 5/19/14  
Daniel Clark*



**Attachment D**

**Non-Hazardous Waste Manifests**



# NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

1200868

If waste is asbestos waste, complete Sections I, II, III and IV  
 If waste is **NOT** asbestos waste, complete Sections I, II and III

350 YBS

26900

## I. GENERATOR (Generator completes la-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of 26900	
d. Generator's Name and Location: Nevada Environmental Response Trust 35 East Wecker, Suite 1650 Chicago, IL 60605 312-498-2800			e. Generator's Mailing Address: NERT 510 4th Street Henderson, NV 89015 312-498-2800		
f. Phone: Chicago, IL 60605 312-498-2800			g. Phone: Henderson, NV 89015 312-498-2800		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name: NERT			i. Owner's Phone No.: 312-498-2800		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	n. Total Quantity	o. Unit Wt/Vol
3825 14 8773	6/30/2014	Non Hazardous, Non Regulated Soil	1 DT		

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Don Clark of ENVIRON authorized		Don Clark of ENVIRON authorized	
p. Generator Authorized Agent Name (Print)		q. Signature	
		r. Date 6/14	

## II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Rafael Construction 5870 Construction Ave Las Vegas, NV 89122		
b. Phone: Las Vegas, NV 89122 702-451-5511		
c. Driver Name (Print)	d. Signature	e. Date
ALAN XISIT	[Signature]	6/14

## III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

a. Disposal Facility and Site Address: Apex Regional Landfill Landfill Physical Address Las Vegas, NV 89165		c. US EPA Number	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print)		f. Signature	g. Date
		[Signature]	6/6/14

## IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information:			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

1200870

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

Form I: Generator information including US EPA ID Number, Manifest Document Number, Generator's Name and Location (Nevada Environmental Response Trust), Mailing Address (NERT), Phone numbers, Owner's Name (NERT), and Waste Profile table.

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Form I continuation: Generator Authorized Agent Name (Print), Signature, and Date.

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

Form II: Transporter information including Transporter's Name and Address (Rafael Construction), Phone, Driver Name (ALAN NIBH), Signature, and Date (6/16/14).

III. DESTINATION (Generator complete IIIa-c and Destination Site completes III d-g)

Form III: Disposal Facility and Site Address (Apex Regional Landfill), US EPA Number, and Discrepancy Indication Space.

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Form III continuation: Name of Authorized Agent (Print), Signature, and Date.

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

Form IV: Operator's Name and Address, Responsible Agency Name and Address, Phone numbers, and Special Handling Instructions.

f. Friable Non-Friable Both % Friable % Non-Friable
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Form IV continuation: Operator's Name and Title (Print), Signature, and Date.

\*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both

**Attachment E**  
**Landfill Soil Disposal Receipts**

81 Environmental Tech  
13550 N Highway 93  
Las Vegas, NV 89165

Ticket Type: INBOUND INVOICE

Ticket Number: 42539  
Date: 06/06/2014  
Time In: 2:53 pm  
Time Out: 3:15 pm

Customer: 001031 - ENVIRON INTERNATIONAL CORP

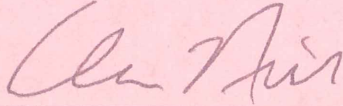
Vehicle/Container: 350YBS  
Contract: 3825 14 6773  
Comment: 3825 14 6773

Gross Weight: 26,880 LB Scale In  
Tare Weight: 12,900 LB Scale Out  
Net Weight: 13980 LB  
Net Tons: 6.99

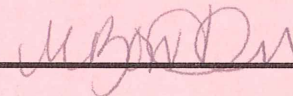
BOL: 1200868

Origin	Yards	Material	Billing	Quantity
Not Applicable	0.00 YD	SW CONTAMINATED SOIL	6.99	TN

Driver: \_\_\_\_\_



Weighmaster: \_\_\_\_\_



BOWDEMI

Indemnification. Customer agrees, by signature above, to indemnify, hold harmless, and defend Republic Services, Inc., its subsidiaries, affiliates, employees, officers and directors from and against any and all liabilities, claims, penalties, forfeitures, suits and the costs and expenses incident thereto, including costs of defense, settlement, and reasonable attorney's fees, which may be incurred, as a result of death or injuries to any person, or damage to any property, contamination of or adverse effects on the environment, caused in whole or in part by the Customer, its employees, or subcontractors in disposing waste at this Facility. In the event Customer delivers Unacceptable Waste (as determined by Republic) Customer agrees to assume all expenses and obligations with the removal and/or resolution of any effects caused by the delivery of such Unacceptable Waste.

Indemnización. Cliente acuerda indemnizar, mantener inmune, y defender Republic Services, Inc., sus subsidiarios, compañías, divisiones, empleados, oficiales y directores contra de cualquiera y de todas responsabilidades, demandas, penas, pérdidas, juicios, pleitos y los costos incidente además, incluyendo costos de defensa, de acuerdo judicial, y de honorarios razonables del abogado, que pueden ser incurridos en, o como resultado de, la muerte o herida personal a cualquier persona, o daños a cualquier característica, propiedad, contaminación de la tierra o efectos ilícitos en esta Facilidad, causado entero o en parte por el cliente, sus empleados, o sus subcontratistas en botar basura en esta Facilidad. En el caso que el Cliente entrega, bota, basura (según lo determinado por Republic) en este Establecimiento basura inaceptable en los reglamentos de este Establecimiento, el Cliente se compromete asumir todos los costos y obligaciones con el retiro y/o la resolución de cualquier dano(s) causado por la entrega de tal basura inaceptable.



81 Environmental Tech  
13550 N Highway 93  
Las Vegas, NV 89165

Ticket Type: INBOUND INVOICE

Ticket Number: 42583  
Date: 06/10/2014  
Time In: 10:34 am  
Time Out: 10:55 am

Customer: 001031 - ENVIRON INTERNATIONAL CORP

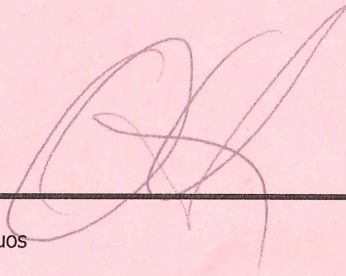
Vehicle/Container: 350YBS  
Contract: 3825 14 6773  
Comment: 3825 14 6773 WHITE TRUCK

Gross Weight: 27,480 LB Scale In  
Tare Weight: 12,860 LB Scale Out  
Net Weight: 14620 LB  
Net Tons: 7.31

BOL: 1200870

Origin	Yards	Material	Billing	Quantity
Not Applicable	0.00 YD	SW CONTAMINATED SOIL	7.31	TN

Driver: 

Weighmaster: 

vasquos

Indemnification. Customer agrees, by signature above, to indemnify, hold harmless, and defend Republic Services, Inc., its subsidiaries, affiliates, employees, officers and directors from and against any and all liabilities, claims, penalties, forfeitures, suits and the costs and expenses incident thereto, including costs of defense, settlement, and reasonable attorney's fees, which may be incurred, as a result of death or injuries to any person, or damage to any property, contamination of or adverse effects on the environment, caused in whole or in part by the Customer, its employees, or subcontractors in disposing waste at this Facility. In the event Customer delivers Unacceptable Waste (as determined by Republic) Customer agrees to assume all expenses and obligations with the removal and/or resolution of any effects caused by the delivery of such Unacceptable Waste.

Indemnización. Cliente acuerda indemnizar, mantener inmune, y defender Republic Services, Inc., sus subsidiarios, compañías, divisiones, empleados, oficiales y directores contra de cualquiera y de todas responsabilidades, demandas, penas, pérdidas, juicios, pleitos y los costos incidente además, incluyendo costos de defensa, de acuerdo judicial, y de honorarios razonables del abogado, que pueden ser incurridos en, o como resultado de, la muerte o herida personal a cualquier persona, o daños a cualquier característica, propiedad, contaminación de la tierra o efectos ilícitos en esta Facilidad, causado entero o en parte por el cliente, sus empleados, o sus subcontratistas en botar basura en esta Facilidad. En el caso que el Cliente entrega, bota, basura (según lo determinado por Republic) en este Establecimiento basura inaceptable en los reglamentos de este Establecimiento, el Cliente se compromete asumir todos los costos y obligaciones con el retiro y/o la resolución de cualquier dano(s) causado por la entrega de tal basura inaceptable.